North Carolina Testing Program

Standard Setting for the End-of-Course and End-of-Grade Assessments

Technical Report

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ALWAYS LEARNING PEARSON

Table of Contents

Table of Appendices

Technical Report

Introduction

The North Carolina Department of Public Instruction (NCDPI), in response to State and Federal legislation, developed and implemented the READY accountability system to measure students' college and career readiness. READY includes revised content standards, End-of-Course (EOC) and End-of-Grade (EOG) curriculum-based assessments, and accountability models for students and teachers. The assessments were administered operationally for the first time in the 2012-13 school year. Given the changes brought about by the READY initiative—specifically, the incorporation of the Common Core State Standards into the North Carolina Standard Course of Study (the academic content standards for North Carolina) and the subsequent redevelopment of the EOG and EOC exams—updated performance standards for the assessments were warranted.

The goals of the standard setting meeting were to establish revised achievement level descriptors (ALDs) and to obtain from North Carolina educators content-oriented recommended standards (cut scores) for the assessments that align with the current North Carolina content standards and with the State's goal of promoting college and career readiness for all students. Standards were established for the following assessments:

- End-of-Grade (EOG) assessments
  - Grades 3-8 English Language Arts/Reading (ELA/R)
  - Grades 3-8 Mathematics
  - Grades 5 and 8 Science
- End-of-Course (EOC) assessments
  - Biology
  - Mathematics I
  - English II

This technical report provides a detailed description of the procedures used by North Carolina educators to make content-oriented cut score recommendations for the EOG and EOC assessments as well as a summary of relevant outcomes of their efforts.

Committees of North Carolina educators convened between July 22 and July 26, 2013, in Chapel Hill, North Carolina to recommend cut scores for nine EOG and EOC assessments. A total of 164 educators participated in the meeting. The standard setting meeting spanned five days, and the number of days panelists participated in the meeting varied across committees. The EOG Mathematics and Reading committees were tasked with recommending cut scores for three adjacent grade levels (Grades 3-5 or 6-8). In this technical report, these committees are referred to as the three-grade committees. For Grades 5 and 8 Science and the three EOC panels, educators recommended cut scores for a single grade/subject. These committees are referred to in this technical report as the single-grade committees. The three-grade committees met for four and one-half days and the single-grade committees met for two days. There were at least three assigned table leaders per committee, and the table leaders remained after the standard setting meeting to participate in a vertical articulation session held on Friday, July 26, 2013.

Pearson was chosen to plan and facilitate the standard setting meeting under the direction of NCDPI. Pearson breakout session facilitators worked with North Carolina educators to refine the provided draft achievement level descriptors, which describe knowledge, skills, and abilities (KSAs) possessed by examinees at each achievement level (i.e., Levels 1, 2, 3, and 4) for the assessment. In addition to ALD refinement activities, Pearson staff facilitated

standard setting activities following the item-mapping method (Lewis, Green, Mitzel, Baum, & Patz, 1998; Mitzel, Lewis, Patz, & Green, 2001) to obtain content-oriented cut score recommendations from educators who are familiar with the assessment's content and the test-taking population.

The lead facilitator provided training to panelists selected by North Carolina to serve as table leaders, presented an opening session presentation to all panelists in conjunction with NCDPI staff, facilitated the vertical articulation meeting, and floated among the breakout session meeting rooms to provide additional support as needed. For each of the nine standard setting committees, a facilitator from Pearson provided training on the standard setting procedure and guided panelists through several rounds of interpretation and discussion of feedback data. Four staff members from Pearson served as data analysts, hand-entering panelists' recorded judgments after each round and performing all analyses required to generate feedback reports. Pearson staff present at this meeting are listed in Table 1.

Table 1. Pearson Staff and Roles

Attendee	Role
Mike Clark, Ph.D.	Lead Facilitator, Floater
Stephen Murphy, Ph.D.	Floater
Jenna Copella, Ed.D.	Small-group Facilitator: Mathematics 3-5
Stephen Jirka	Small-group Facilitator: Mathematics 6-8
Tracey Hembry, Ph.D.	Small-group Facilitator: Reading 3-5
Mark Robeck, Ph.D.	Small-group Facilitator: Reading 6-8
Mustafa (Kuzey) Bilir, Ph.D.	Small-group Facilitator: Science 5
Ryan Glaze, Ph.D.	Small-group Facilitator: Science 8
Alvaro Arce-Ferrer, Ph.D.	Small-group Facilitator: Biology
James Ingrisone, Ph.D.	Small-group Facilitator: English II
Jie (Serena) Lin, Ph.D.	Small-group Facilitator: Mathematics I
Michelle Boazeman	Lead Data Analyst
Robbie Furter	Data Analyst
Wenlong Zheng	Data Analyst
Tommy Vu	Data Analyst
Melissa Cantrell	Project Support and Logistics
Judy Murphy	Project Support and Logistics
Jonathan Bramlett	Project Support and Logistics
Stacy Strother	Project Support and Logistics

Panelists

Panelists met in nine committees to perform the primary activities of writing achievement level descriptors and making content-oriented cut score recommendations. Standard setting committees were divided up as follows: Grades 3–5 Mathematics, Grades 6-8 Mathematics, Grades 3-5 Reading, Grades 6-8 Reading, Grade 5 Science, Grade 8 Science, Mathematics I, English II, and Biology. Following the conclusion of the standard setting activities, table leaders from each committee participated in an additional vertical articulation session. This section summarizes characteristics of both the standard setting committees as well as the vertical articulation committee.

Standard Setting Committees

Panelists were asked to provide voluntary demographic information, using the survey shown in Appendix E. The panelists' years of experience as educators are summarized in Table 2.

As illustrated by this table, participants in this standard setting had a wide range of teaching experience.

Table 2. Panelist Experience

Panel	N	Years in Current Position					
		1-5	6-10	11-15	16-20	21+	NR
Mathematics 3-5	20	1	4	8	2	4	1
Mathematics 6-8	16	2	3	4	5	2	0
Reading 3-5	18	1	3	5	1	8	0
Reading 6-8	19	2	2	6	6	3	0
Science 5	16	1	5	5	5	0	0
Science 8	17	3	6	5	1	2	0
Biology	20	2	5	6	4	3	0
English II	17	3	5	5	2	1	1
Mathematics I	21	4	3	5	2	7	0

Note: NR = No Response.

The panelists' professional backgrounds are summarized in Table 3 and Table 4. As previously mentioned in the introduction of this technical report, panelists summarized in Table 3 made cut score recommendations for three adjacent grade levels within a particular subject area. Individuals reported as teaching in lower, middle, or upper grades are reported in the context of their committee. For example, a lower-grade panelist in the Mathematics 3-5 panel teaches Grade 3 Mathematics, while a lower-grade panelist in the Reading 6-8 panel teaches Grade 6 Reading. Panelists who reported teaching more than one grade level within the subject area are listed under the multiple grades column, and panelists who primarily teach a grade level outside of the panel's range (e.g., a Grade 2 teacher who participated in the Mathematics 3-5 panel) are listed in the off-grade column. Finally, other groups of educators are summarized in the remaining columns of this table. As shown in this table, all grade levels were represented on these panels, and a variety of professional backgrounds was represented on these panels.

Table 3. Panelist Professional Background: Three-Grade Panels

Panel	LOW	MID	UP	MUL	OFF	SED	SPE	COA	GNS	OTH
Mathematics 3-5	3	6	5	2	1	0	2	1	0	0
Mathematics 6-8	7	3	3	1	0	1	1	0	0	0
Reading 3-5	3	1	4	3	1	0	4	0	1	1
Reading 6-8	4	5	3	2	0	3	0	0	0	2

Note: LOW = lower grade, MID = middle grade, UP = upper grade, MUL = multiple grades, OFF = off-grade, SED = special education, SPE = specialist, COA = coach, GNS = grade level not specified, OTH = other.

Panelists summarized in Table 4 recommended cut scores for a single grade and/or subject. Panelists listed in the on-grade column actively teach in the grade/subject for which standards were being set. Panelists summarized in the off-grade column teach in a related subject area, but at a different grade level. Other types of professional backgrounds are summarized to the right of these columns in the table. As shown in this table, the majority of each panel was comprised of individuals who teach the grade/subject of interest, but each showed diversity in panelists' professional backgrounds as well.

Table 4. Panelist Professional Background: Single-Grade Panels

Panel	ON	OFF	SED	SPE	COA	HED	OTH	RET	NR
Science 5	7	4	0	1	0	0	4	0	0
Science 8	11	4	1	0	0	0	0	0	1
Biology	17	0	0	1	0	1	0	1	0
English II	11	2	1	0	0	2	1	0	0
Mathematics I	15	2	0	1	1	0	1	0	1

Note: ON = on-grade, OFF = off-grade, SED = special education, SPE = specialist, COA = coach, HED = higher education, OTH = other, RET = retired, NR = no response.

Table 5 contains a summary of panelists' gender and ethnicity. As these tables illustrate, panels generally were representatively diverse in these areas.

Table 5. Panelist Gender and Ethnicity

	Gender			Ethnicity						
Panel	F	M	NR	AA	AS	HI	NA	WH	MU	NR
Mathematics 3-5	18	2	0	7	0	0	0	12	0	1
Mathematics 6-8	11	5	0	3	0	1	0	12	0	0
Reading 3-5	17	1	0	7	1	1	1	6	2	0
Reading 6-8	18	1	0	4	0	0	1	14	0	0
Science 5	16	0	0	4	0	0	0	12	0	0
Science 8	13	4	0	0	1	1	1	13	1	0
Biology	17	3	0	1	0	1	0	18	0	0
English II	14	3	0	1	0	2	0	14	0	0
Mathematics I	20	1	0	3	0	1	0	17	0	0

Note: F = female, M = male, NR = no response, AA = African American, AS = Asian, HI = Hispanic, NA = Native American, WH = white, MU = multiple responses.

In addition to reporting their own demographic characteristics, panelists were asked to report the characteristics of their districts. Table 6 summarizes district geographic location within the state, and Table 7 displays a summary of panelists' self-reported district size and community setting. As demonstrated by the information provided in these tables, panelists making up the standard setting committees showed representative diversity among geographic regions, district sizes, and community settings across North Carolina.

Table 6. Panelist Geographic Region

Panel	C	NC	NE	NW	SC	SE	SW	W	MU	NR
Mathematics 3-5	4	1	0	1	4	4	5	1	0	0
Mathematics 6-8	1	2	1	1	2	3	4	2	0	0
Reading 3-5	2	1	1	0	4	3	4	2	0	1
Reading 6-8	0	1	1	4	2	5	5	0	1	0
Science 5	4	2	0	0	2	1	5	2	0	0
Science 8	5	1	1	1	4	2	2	1	0	0
Biology	3	4	1	3	1	2	5	0	0	1
English II	4	0	1	3	4	2	2	1	0	0
Mathematics I	6	2	0	3	4	0	6	0	0	0

Note: C = central, NC = north central, NE = northeastern, NW = northwestern, SC = south central, SE = southeastern, SW = southwestern, W = western, MU = multiple responses, NR = no response.

Table 7. Panelist District Characteristics

Panel	District Size				Community Setting			
	NR	SM	MD	LG	NR	RU	SU	UR
Mathematics 3-5	0	4	6	10	1	10	4	5
Mathematics 6-8	0	4	5	7	0	9	4	3
Reading 3-5	1	7	3	7	1	9	3	5
Reading 6-8	0	6	8	5	1	11	5	2
Science 5	0	2	7	7	0	7	6	3
Science 8	0	3	8	6	0	8	4	5
Biology	1	4	6	9	1	6	8	5
English II	1	6	5	5	1	11	2	3
Mathematics I	1	7	6	7	0	6	8	7

Note: NR = no response, SM = small, MD = medium, LG = large, RU = rural, SU = suburban, UR = urban.

All panelists who are classroom teachers were asked to provide estimates of various demographic characteristics of their students. Table 8 provides a summary of these self-reported estimates of student gender and ethnic diversity among the standard setting panelists. Table 9 shows the self-reported percentages students who are economically disadvantaged, receive an English Language Learning accommodation, and receive an Individualized Education Plan accommodation.

Table 8. Panelists' Reported Student Characteristics: Gender and Ethnicity

Panel	Gender		Ethnicity						
	F	M	AA	AS	HI	NA	PI	WH	MU
Mathematics 3-5	44	56	30	3	12	0	0	49	2
Mathematics 6-8	45	55	29	3	17	1	1	36	4
Reading 3-5	48	52	41	1	14	3	0	38	1
Reading 6-8	45	50	32	1	12	1	0	49	2
Science 5	45	46	18	2	10	1	0	50	1
Science 8	47	53	23	3	6	1	0	46	1
Biology	52	49	30	5	14	0	0	43	1
English II	49	45	21	1	15	1	0	47	1
Mathematics I	51	49	16	1	8	2	0	32	0

Note: All values are means of self-reported percentages, which may not sum to 100%. F = female, M = male, AA = African American, AS = Asian, HI = Hispanic, NA = Native American, PI = Pacific Islander, WH = white, MU = multiple responses, N/A = not applicable.

Table 9. Panelists' Reported Student Characteristics: SES and Accommodations

Panel	EDV	ELL	IEP
Mathematics 3-5	62	18	24
Mathematics 6-8	71	21	36
Reading 3-5	61	22	17
Reading 6-8	67	11	33
Science 5	56	12	16
Science 8	50	7	19
Biology	54	21	17
English II	49	6	27
Mathematics I	57	10	26

Note: All values are means of self-reported percentages. EDV = economically disadvantaged, ELL = English language learning accommodation, IEP = individual education plan accommodation.

Because the cut score recommendations made by the committee are applied to all students who take these assessments, obtaining recommendations from a panel that has adequate

diversity in these key traits is critical in ensuring that recommended cut scores are valid and appropriate for the entire student population.

Vertical Articulation Committee

Each standard setting breakout session room, which contained between 16 and 20 total panelists, was arranged to include three tables. At various points throughout the process, panelists within a committee broke up and worked together in groups of between 5 and 7 individuals at each table. Each of the three tables had at least one designated table leader, who was selected by NCDPI and trained by the lead facilitator. At the conclusion of the standard setting activities, table leaders were asked to stay for one additional task: participating in the vertical articulation committee. Demographic characteristics of the vertical articulation committee were collected by way of survey (see Appendix E), and those characteristics are summarized in the following tables. Due to the diverse nature of professional backgrounds amongst vertical articulation panelists, professional background is not summarized in this section of the report, but a list of all collected responses to that survey question is provided in Appendix O.

Table 10. Vertical Articulation Panelist Experience

	Years in Current Position					
N	1-5	6-10	11-15	16-20	21+	NR
27	3	7	9	2	6	0

Note: NR = No Response.

Table 11. Vertical Articulation Panelist Gender and Ethnicity

Gender			Ethnicity						
F	M	NR	AA	AS	HI	NA	WH	MU	NR
25	2	0	4	0	3	1	19	0	0

Note: F = female, M = male, NR = no response, AA = African American, AS = Asian, HI = Hispanic, NA = Native American, WH = white, MU = multiple responses.

Table 12. Vertical Articulation Panelist Geographic Region

C	NC	NE	NW	SC	SE	SW	W	MU	NR
4	3	1	3	5	5	4	2	0	0

Note: C = central, NC = north central, NE = northeastern, NW = northwestern, SC = south central, SE = southeastern, SW = southwestern, W = western, MU = multiple responses, NR = no response.

Table 13. Vertical Articulation Panelist District Characteristics

District Size			Community Setting		
SM	MD	LG	RU	SU	UR
6	10	11	13	10	4

Note: SM = small, MD = medium, LG = large, RU = rural, SU = suburban, UR = urban.

Table 14. Vertical Articulation Panelists' Reported Student Characteristics: Gender and Ethnicity

Gender		Ethnicity						
F	M	AA	AS	HI	NA	PI	WH	MU
50	50	34	2	15	1	45	2	0

Note: All values are means of self-reported percentages, which may not sum to 100%. F = female, M = male, AA = African American, AS = Asian, HI = Hispanic, NA = Native American, PI = Pacific Islander, WH = white, MU = multiple responses, N/A = not applicable.

Table 15. Vertical Articulation Panelists' Reported Student Characteristics: SES and Accommodations

EDV	ELL	IEP
56	17	20

Note: All values are means of self-reported percentages. EDV = economically disadvantaged, ELL = English language learning accommodation, IEP = individual education plan accommodation.

Method and Procedure

A total of nine panels set standards for 17 grades and subjects. Panelists on the three-grade committees recommended standards for three adjacent grade levels within Mathematics or Reading (i.e., grades 3-5 or 6-8). For the single-grade committees, panelists recommended standards for a single grade/subject. Although all nine panels used a similar methodology for panelists to render their judgments, the scope of activities varied across the two panel types. The three-grade panels convened between July 22 through 26, 2013, while the single-grade panels convened between July 24 and 25, 2013. The agenda for the single-grade panels is provided in Appendix A, and the agenda for the three-grade panels is provided in Appendix B. Presentation slides are provided in Appendix Q.

Table Leader Training

On the morning of Monday, July 22, prior to the standard setting workshop, training was held for table leaders for the three-grade panels. For the single-grade panels, table leader training was held during the morning of Wednesday, July 24. During this training session, table leaders were introduced to the standard setting facilitators, trained on their role in the standard setting process, and received a general introduction and instruction on the item mapping process. Following table leader training, representatives of the North Carolina Department of Public Instruction and Pearson presented an opening session to all panelists. The three-grade panel opening session occurred on July 22, and the single-grade opening session occurred on July 24.

Opening Session and Introductions

After the conclusion of the opening session, panelists dispersed to their breakout session meeting rooms. Each panel convened in a separate breakout session room to complete the required standard setting activities. Each panelist was provided a folder containing secure materials to be used throughout the meeting. Panelists were asked to mark all materials they received with their unique assigned panelist identification number. Prior to beginning the standard setting activities, panelists signed security agreements and completed a demographic information survey. Concurrent with this activity, panelists introduced themselves to their colleagues within their breakout session meeting room.

Achievement Level Descriptors

Following committee introductions, the three-grade panels spent the remainder of Monday, July 22 writing and discussing achievement level descriptors (ALDs), which serve as content-oriented statements describing expectations of student performance at each achievement level, for the three grade levels assigned to their panels. For the single-grade panels, a portion of July 24 was devoted to ALD writing for their single assigned assessment, and then the single-grade panels moved on to other standard setting activities that day. Breakout session facilitators provided panelist with ALD training that covered the purpose of ALDs, and facilitators shared several real-world examples demonstrating characteristics of effective ALDs. Panelists were trained on strategies to link ALDs to the test blueprint and curriculum standards, both of which were made available to panelists. Panelists were provided draft ALDs from NCDPI (see Appendix C), which included general, policy-oriented statements about student achievement across levels. Panelists were tasked with adding content-oriented statements to the draft ALDs to further define student

achievement in the context of the assessment. The panels' final drafted ALDs, which were turned over to NCDPI for review and future revisions, as deemed necessary, are provided in Appendix D.

Standard Setting

"Just Barely" Level Descriptors

Following ALD writing activities, panelists performed tasks to set standards for their assigned subject area and grade(s). Panelists began by drafting and discussing "just barely" level descriptors: statements describing performance expectations for students who are *just barely* at the three cut points separating the four achievement levels. The "just barely" level descriptors are critical to standard setting for two reasons. First, discussing characteristics of students who are just barely at a particular cut point dividing two adjacent achievement levels aids panelists in developing a strong understanding of the differences in observed student performance across achievement levels. Second, in subsequent steps occurring during the standard setting process, panelists referred to the "just barely" level descriptions to anchor their judgments to a common understanding of achievement expectations.

Ordered Item Book Review

Next, panelists completed a "test-taking" activity to familiarize themselves with the assessment's test items, which was accomplished by reviewing the ordered item book (OIB). NCDPI staff produced the OIBs, which contained items used during the spring 2013 administration. Each page of the OIB contained one item, and items were ordered in ascending empirical difficulty as estimated from actual student performance such that the first page of the OIB included the least difficult item and the last page of the OIB contained the most difficult item. Panelists were instructed to review and answer the items in the OIB. Each ordered item book was accompanied by an item map, which contained useful item-level information such as OIB page number, key, reading selection ID (for test with reading selections only), and linked content standard. After completing the OIB review, panelists were given an opportunity to share their thoughts and reactions to the test's content with their colleagues in the breakout session.

Standard Setting Training and Practice Round

Following the completion of the ordered item book review, the breakout session facilitator provided panelists with training on the standard setting process. The item mapping procedure (Lewis, Green, Mitzel, Baum, & Patz, 1998; Mitzel, Lewis, Patz, & Green, 2001) is the judgmental process that was used in this standard setting. According to this procedure, panelists are asked to identify the item in the ordered item book that is the last item that a student who is just barely at a given achievement level should be able to answer correctly more often than not. The locations for the items in the ordered item book were established using a guess-adjusted response probability of two-thirds (or 2/3), representing the point on the item characteristic curve at which the probability of a correct response is two-thirds of the way between the curve's lower asymptote and 1.0.

Following item mapping methodology training, panelists completed a practice round of judgment. Using a shortened ordered item book and item map, each of which were comprised of 10 items spanning the empirical difficulty range observed in the full OIB, panelists practiced the item mapping methodology by reading the items in the practice OIB and placing a single cut for Achievement Level 3 only. The purpose of the practice round was to reinforce panelists' understanding of the item mapping process by allowing them to apply the concepts covered during the standard setting training. Following the practice round, the breakout session facilitator led a short committee-wide discussion to gather

panelists' thoughts and reactions to the item mapping procedure, as well as to respond to any lingering questions or misunderstandings.

Round 1 Standard Setting

Once all questions from the practice round were addressed, panelists began the standard setting process. For the three-grade panels, standard setting activities began at the lower grade level (i.e., grade 3 for the panels assigned to grades 3-5, grade 6 for panels assigned to grades 6-8). For each assessment, panelists set three recommended cut scores, which separate test scores into four distinct achievement level categories. Prior to beginning the standard setting activity, panelists were instructed to complete a short readiness survey, on which panelists affirm that they understand the process and feel prepared to begin (see Appendix F). Panelists were encouraged to seek clarification from the breakout session facilitator on any remaining questions or concerns, should they have any, prior to beginning the first round of judgment. Upon unanimous positive affirmation of readiness to proceed, committees began the standard setting process. The standard setting process consisted of three rounds of judgment. Panelists completed readiness surveys affirming their understanding of the process and willingness to proceed prior to beginning each of the three rounds. The committees were instructed to set their cuts in order starting at Level 2, then at Level 3, and finally at Level 4.

Panelists worked independently to place their bookmarks across all three rounds of judgment. For each round, panelists were instructed to place three bookmarks within the ordered item booklet corresponding to their cut score recommendations: one for Level 2, one for Level 3, and one for Level 4. Panelists wrote the page numbers corresponding to their three recommended cut scores on the recording sheet (see Appendix G). The breakout session facilitator collected all of the committee's recording sheets at the conclusion of each round of judgment and handed them over to the data analysts for data entry and processing.

Behavioral Descriptors

Panelists were provided with feedback data after each round of judgment; however, due to the processing time requirements, panelists engaged in other activities while awaiting feedback data in order to avoid long periods of downtime for panelists between rounds of judgment. For single-grade committees, panelists developed behavioral descriptors between Rounds 2 and 3; for the three-grade committees, panelists completed this activity between Rounds 1 and 2. Panelists wrote brief phrases or sentences that described observable, content-oriented behavioral characteristics of students across the score scale. The breakout session facilitator managed the discussion on this topic and recorded the panel's behavioral descriptions. Although not a primary output of emphasis of the standard setting meeting, these behavioral descriptors created by North Carolina educators were collected by NCDPI for a longer-term goal of eventually being incorporated into an integrated feedback system designed to offer stakeholders more concrete feedback on student performance beyond scores and achievement level outcomes.

To help guide panelists' discussions while they created behavioral descriptions, panelists were provided with content domain item maps. The content domain item map was similar to the OIB item map in that it provided panelists with useful information on the items in the ordered item booklet, but the content domain item map differed from the OIB item map in several important ways. Whereas the OIB item map presented items in the same order as they appeared in the ordered item booklet, the content domain item map organized items on the page vertically by empirical difficulty (reported on a temporary score scale metric constructed solely for the purposes of this standard setting) and grouped them horizontally into columns by their content domains.

Round 1 Feedback and Discussion and Round 2 Standard Setting

After each round of judgment, panelists were provided with feedback data to consider and discuss. Following Round 1, panelists received table-level and panel-level feedback. They were provided the cut scores for each panelist at their table based on the Round 1 ratings, in addition to the minimum, maximum, mean, and median cut score at each cut point for that table. In reviewing the judgment agreement data with the other committee members seated at their table, panelists were asked to consider and discuss the following:

- How similar their cut scores were to that of the rest of the table (i.e., is a given panelist more lenient or stringent than the other panelists?)
- If a panelist had cut scores dissimilar to the table, why?
- Do panelists have different conceptualizations of "just barely" level students?

Panelists were instructed by the breakout session facilitator that reaching consensus was not the goal of these discussions, but panelists should share their perspectives to get a feel for why observed cut score judgment differences might exist. The table leaders, with assistance from the breakout session facilitator, helped guide this discussion so that all panelists at their table had an opportunity to share their thoughts and perspectives with the other panelists at the table. Panelists compared bookmarks and discussed the differences between them. Using data provided in the feedback handouts, panelists discussed their judgments related to items in the range between the highest and lowest bookmarks for each achievement level. An example of the rating agreement feedback data provided to each table of panelists is provided in Table 16.

Table 16. Example Table-Level Rating Agreement Feedback Data

Judge	Level 2 Cuts	Level 3 Cuts	Level 4 Cuts
A1	41	72	82
A2	30	63	80
A3	23	55	75
A4	22	62	78
A5	43	70	82
A6	37	73	82
Mean	**33**	**66**	**80**
Median	**34**	**67**	**81**
Minimum	**22**	**55**	**75**
Maximum	**43**	**73**	**82**

Following table-level discussions, panelists were provided committee-wide feedback data and engaged in a similar conversation, moderated by the breakout session facilitator, at the committee level. As a large group, panelists shared highlights of discussions they held at their tables, and they discussed observed cut score differences across the tables. An example of the committee-level rating agreement feedback data is provided in Table 17.

Table 17. Example Committee-Level Rating Agreement Feedback Data

Table	Judge	Level 2 Cuts	Level 3 Cuts	Level 4 Cuts
1	A1	41	72	82
	A2	30	63	80
	A3	23	55	75
	A4	22	62	78
	A5	43	70	82
	A6	37	73	82
2	B7	23	50	66
	B8	22	50	70
	B9	22	49	72
	B10	25	60	72
	B11	25	63	82
	B12	35	68	81
3	C13	22	53	68
	C14	14	42	60
	C15	23	43	68
	C16	23	54	73
	C17	23	55	66
	C18	26	55	72
Overall	**Mean**	**27**	**58**	**74**
	Median	**23**	**55**	**73**
	Minimum	**14**	**42**	**60**
	Maximum	**43**	**73**	**82**

In addition to the Round 1 cut score agreement data, panelists were shown external data to further inform their judgments in subsequent rounds of judgment. Panelists were provided with empirical item difficulty data showing the proportion of all test-takers from the spring 2013 administration who correctly answered each item (i.e., item *p*-values). The breakout session facilitator also shared with panelists the ACT Explore® cut score, which was linked to the North Carolina assessment by NCDPI, representing the score point at which students are on-track to be college and career-ready. Finally, the facilitator shared with panelists the expected cut scores obtained by NCDPI from a recent survey of North Carolina educators. As shown in Table 18, cut scores shared with panelists were translated into page numbers in the ordered item book to help facilitate comparisons between the external data and their own cut score judgments. For some assessments, the cut score from the teacher survey for Level 2—and in the case of Mathematics I, for Level 3 as well—was lower than the estimated empirical difficulty level associated with the first page of the ordered item booklet. In these instances, the cut was set to page 1.

Table 18. Linked Page Cuts from the Teacher Survey and ACT Explore®

Assessment	Level 2	Level 3	Level 4	Explore®
Mathematics 3	6	22	66	48
Mathematics 4	1	14	60	44
Mathematics 5	1	8	56	38
Mathematics 6	1	3	48	29
Mathematics 7	1	3	46	30
Mathematics 8	1	3	34	28
Reading 3	9	39	73	66
Reading 4	9	35	61	58
Reading 5	5	29	59	55
Reading 6	6	30	64	63
Reading 7	6	33	61	58
Reading 8	4	27	57	57
Science 5	4	25	57	52
Science 8	4	21	57	67
Biology	9	26	63	*
English II	3	25	61	*
Mathematics I	1	1	38	*

*Note: No linked ACT Explore® cut scores were provided for the EOC panels.

Following discussion of Round 1 cut scores and the provided feedback data, panelists proceeded to the second round of judgment. Following discussion of external feedback data, panelists once again completed readiness surveys and began Round 2, using the same procedure that was previously outlined in the description of Round 1.

Round 2 Feedback and Discussion and Round 3 Standard Setting

Following Round 2, panelists received updated cut score agreement feedback data and engaged in discussions at both the table level as well as across the committee. Additionally, panelists were shown a graphical display of student impact data. The impact data displayed the percentages of spring 2013 test-takers who would be classified into the four achievement levels based on the panel's median cut score recommendation. Impact was shown for the overall North Carolina test-taking population, and impact was also broken down by gender and ethnicity subgroups. Panelists were given an opportunity to discuss the appropriateness of their cut scores given the current impact data. Following discussion of the Round 2 feedback data, panelists completed readiness surveys and proceeded to the third and final round of judgment.

Round 3 Feedback and Discussion

Following Round 3, panelists were shown their final recommended cut scores, which were based on the committee's median cut score judgments from this final round of judgment. Panelists were shown impact data, again illustrating overall impact as well as impact broken down by gender and ethnicity.

Standard Setting Evaluations

After reviewing and discussing the Round 3 impact data, panelists completed an evaluation survey capturing their reactions to the final cut score recommendations and associated impact data. The evaluation survey is shown in Appendix H. The standard setting workshop activities concluded at this point for the single-grade committees. For the three-grade

committees, the breakout session facilitator guided panelists through the same process for the middle and upper grades, starting with the ordered item book review and then proceeding directly to Round 1. Following the conclusion of standard setting activities, all panelists were dismissed with the exception of table leaders, who attended the vertical articulation session on Friday, July 26.

Vertical Articulation

Table leaders from each committee convened in a single room to participate in the vertical articulation session. During this session, impact data were compared across grade levels within subject areas (e.g., Grades 3-8 Reading) and also across subjects. Panelists were asked to evaluate and discuss, from a policy perspective, the reasonableness of the committees' content-oriented cut score recommendations and the impact of imposing these achievement expectations on student test scores. Panelists were guided through a process whereby they evaluated the reasonableness of impact for particular grades/subjects, both in isolation and in contrast to other grades and subject areas. Table leaders from each committee were present in the vertical articulation meeting, which allowed them an opportunity to share with the entire group their reflections on the execution of the standard setting procedure as well as the discussions that occurred within their committees. Following group discussions of the cuts and impact data, the lead facilitator asked the vertical articulation committee if they felt any cut score changes may be appropriate, given the observed patterns of impact data. The lead facilitator projected a spreadsheet with cut scores and impact data, and panelists were permitted to suggest potential revised cut scores to see real-time changes to impact data based on these potential revisions. Following NCDPI's instructions, the lead facilitator did not limit the range of potential cut score changes available to the vertical articulation committee, but the lead facilitator did provide verbal notice to the panel at any point at which their recommended cut scores (discussed in terms of page numbers) deviated more than +/- 1 standard error of the original median page cut, where the standard error of the median was computed as

$$SE_{Median} = 1.253\frac{\sigma}{\sqrt{N}}. \quad (1)$$

In addition to the standard error of the median, the lead facilitator also considered the range of the original panel's cut score judgments when engaging the vertical articulation committee in discussion of potential changes to the cut scores. In instances where the vertical articulation committee expressed a desire to explore possible cut scores outside the observed range of content-oriented cut scores recommended by the original panel, the lead facilitator notified the vertical articulation panel of this fact.

Each participant on the vertical articulation panel considered the original recommended cut scores and their impact data as well as other potential cut scores and the changes in impact data associated with these potential cuts. Each member of the vertical articulation committee provided a unique, independent recommendation to either keep or change the cut scores. Consistent with the previous phase of the standard setting meeting, members of the vertical articulation committee completed readiness surveys (see Appendix L) and unanimously affirmed their understanding of the process and willingness to proceed prior to rendering their final recommendations. The lead facilitator impressed upon the vertical articulation panel that their holistic, policy-oriented cut score recommendations would supplement, not overwrite, the content-oriented cut recommendations provided by the standard setting panels and would provide the North Carolina State Board of Education with additional information to consider when deciding which cut scores to adopt. Each member of the vertical articulation committee provided an independent recommendation to either keep or adjust the cut scores for every grade and subject. Panelists recorded their judgments on

provided forms (see Appendix M) and returned them to the lead facilitator for processing. After completing the vertical articulation process for all grades and subjects, panelists completed an evaluation survey of the vertical articulation process (see Appendix N).

Results

The standard setting panels' final recommended cut scores, obtained prior to the vertical articulation session, are presented in Table 19. The reader should note that these cut scores are reported as page numbers within the ordered item book, not raw scores. NCDPI will translate these page cuts into the final reporting scale in a future study, which will be documented separately from this standard setting technical report. The figures following Table 19 display impact data for the Mathematics, Reading, Science, and End-of-Course assessments, respectively, based upon these cut score recommendations. Tables and figures showing individual panelists' page cuts across rounds are provided in Appendix I.

Table 19. Pre-Vertical Articulation Page Cuts

Assessment	Level 2	Level 3	Level 4
Mathematics 3	16	41	69
Mathematics 4	15	34	70
Mathematics 5	9	33	65
Mathematics 6	10	32	67
Mathematics 7	9	28	59
Mathematics 8	10	30	70
Reading 3	26	55	74
Reading 4	25	58	75
Reading 5	23	55	71
Reading 6	15	46	69
Reading 7	15	45	70
Reading 8	16	42	70
Science 5	12	45	69
Science 8	6	20	64
Biology	20	47	68
English II	9	34	79
Math I	9	29	60

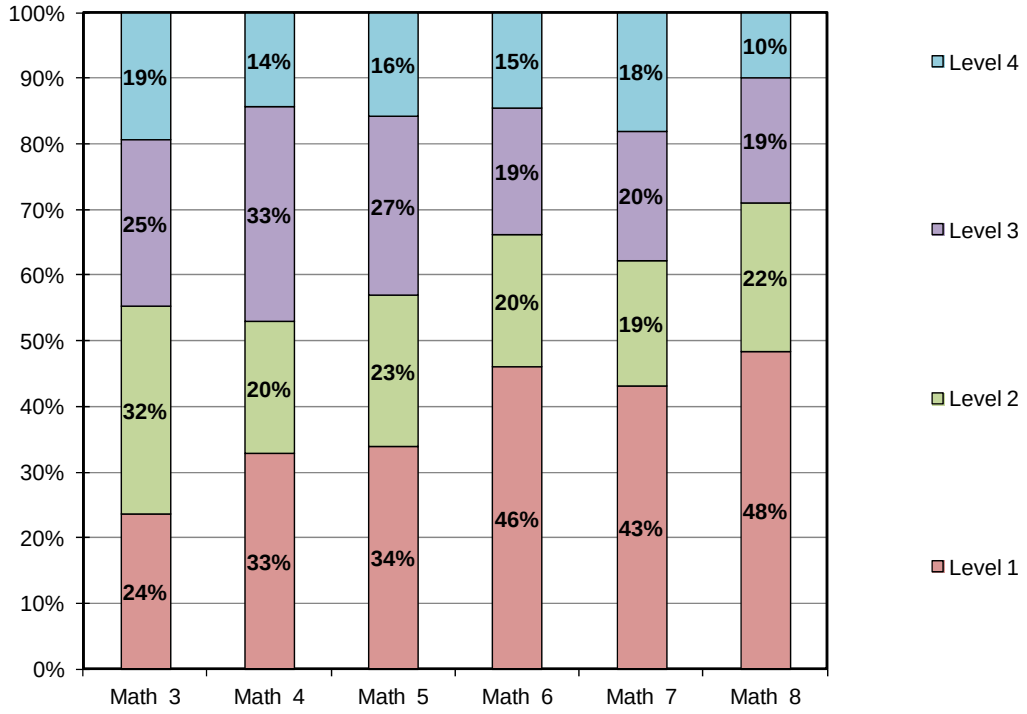


Figure 1. Pre-Vertical Articulation Impact Data: Mathematics 3-8

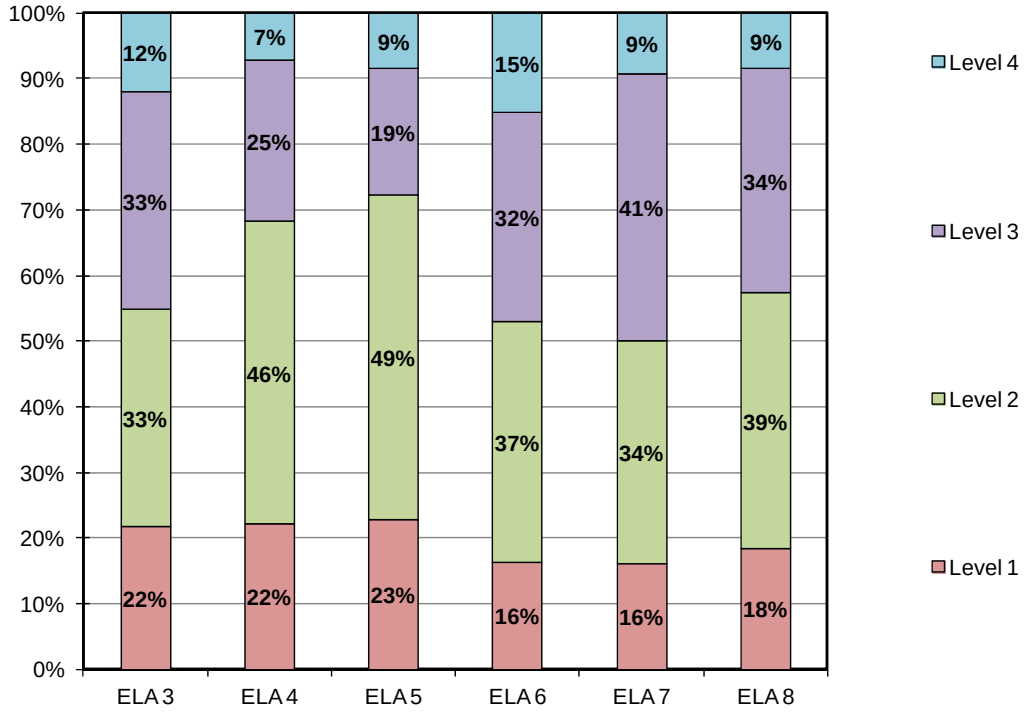


Figure 2. Pre-Vertical Articulation Impact Data: Reading 3-8

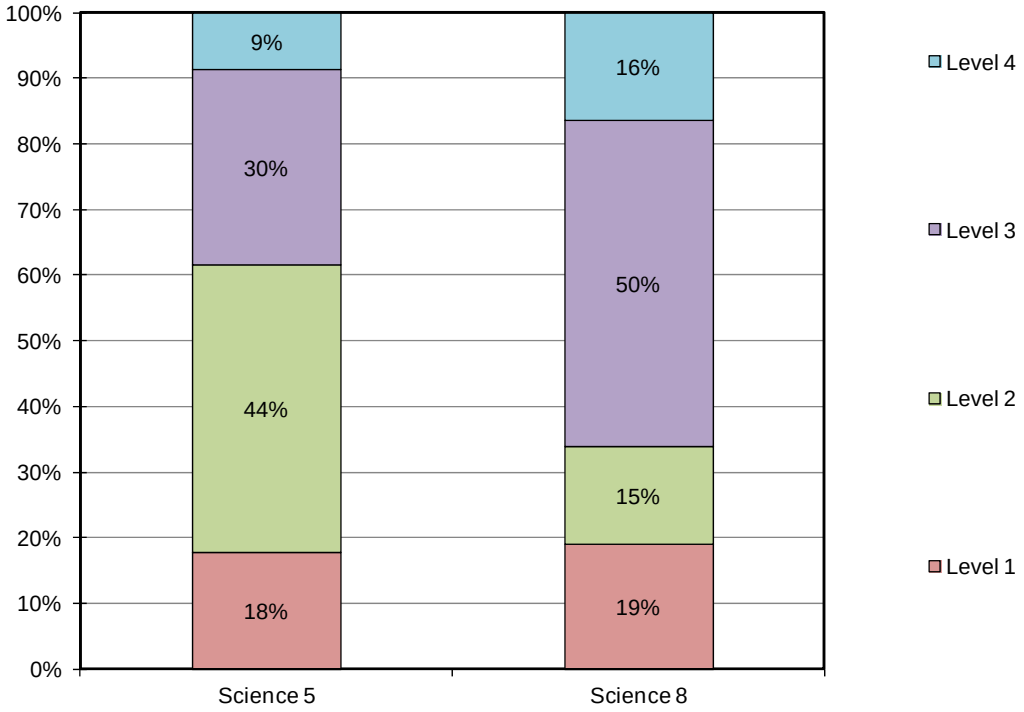


Figure 3. Pre-Vertical Articulation Impact Data: Science 5 and 8

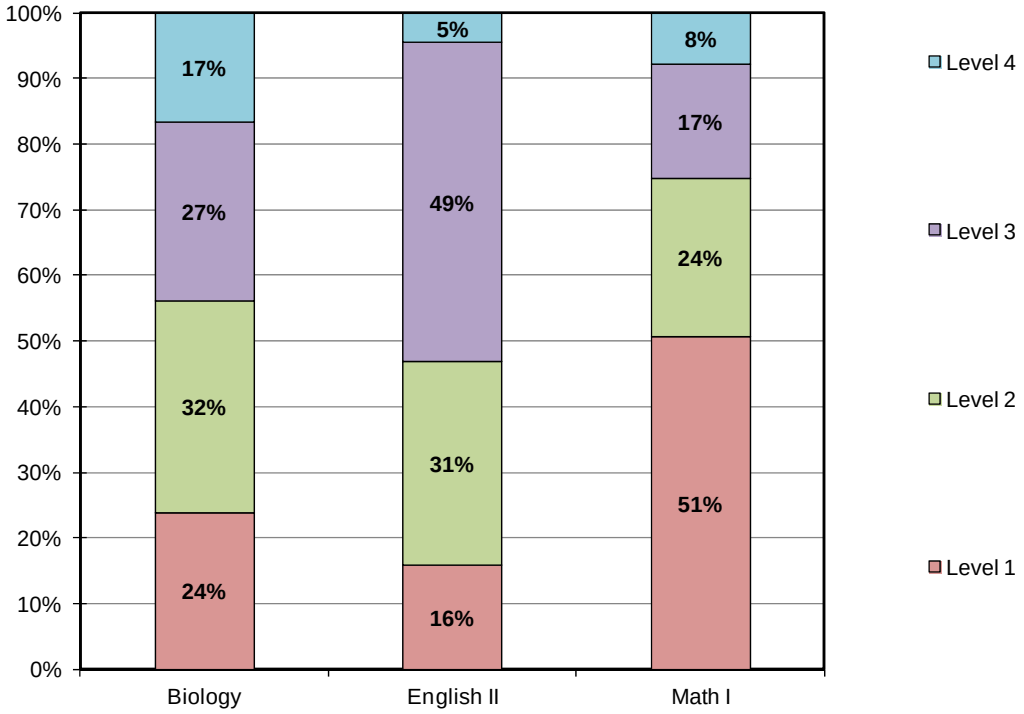


Figure 4. Pre-Vertical Articulation Impact Data: EOC

Panelists completed evaluation surveys following the third and final round of standard setting for each grade level. The survey questions panelists' responses are shown in Appendix J and Appendix K.

Recommended cut scores obtained from the vertical articulation session are shown in Table 20, and impact data associated with these recommended cut scores are displayed in the subsequent figures.

Table 20. Post-Vertical Articulation Page Cuts

Assessment	Level 2	Level 3	Level 4
Mathematics 3	16	38	73
Mathematics 4	10	34	70
Mathematics 5	7	30	65
Mathematics 6	4	24	67
Mathematics 7	6	28	65
Mathematics 8	5	25	70
Reading 3	26	55	74
Reading 4	25	50	75
Reading 5	23	46	71
Reading 6	15	46	73
Reading 7	15	47	70
Reading 8	16	42	70
Science 5	12	40	69
Science 8	6	25	64
Biology	20	47	71
English II	9	36	79
Math I	2	20	60

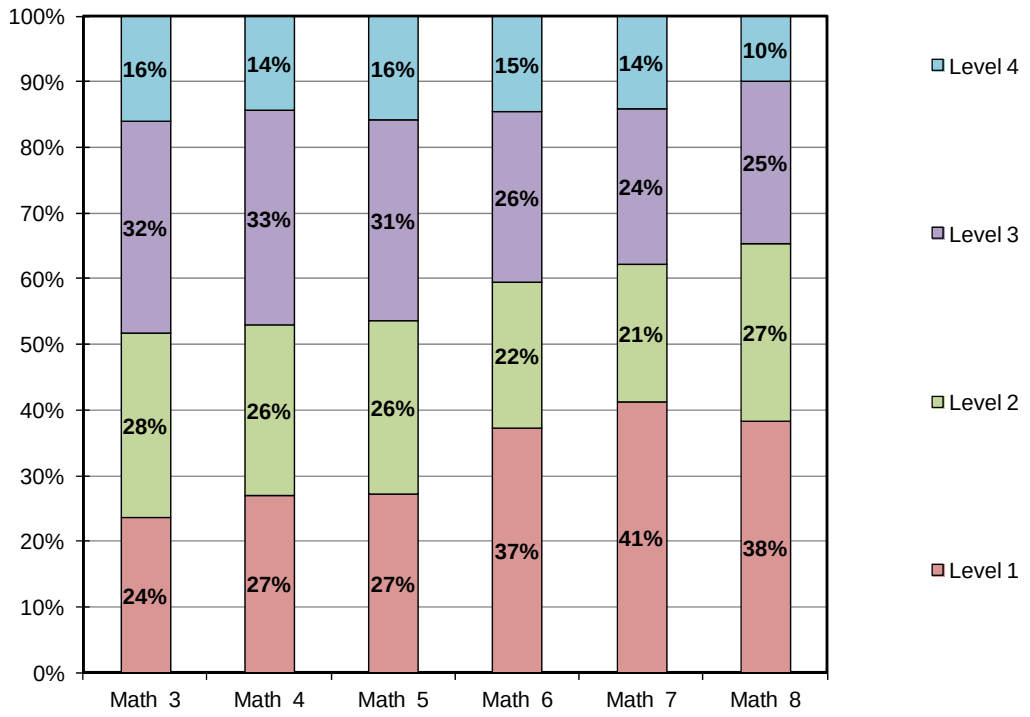


Figure 5. Post-Vertical Articulation Impact Data: Mathematics 3-8

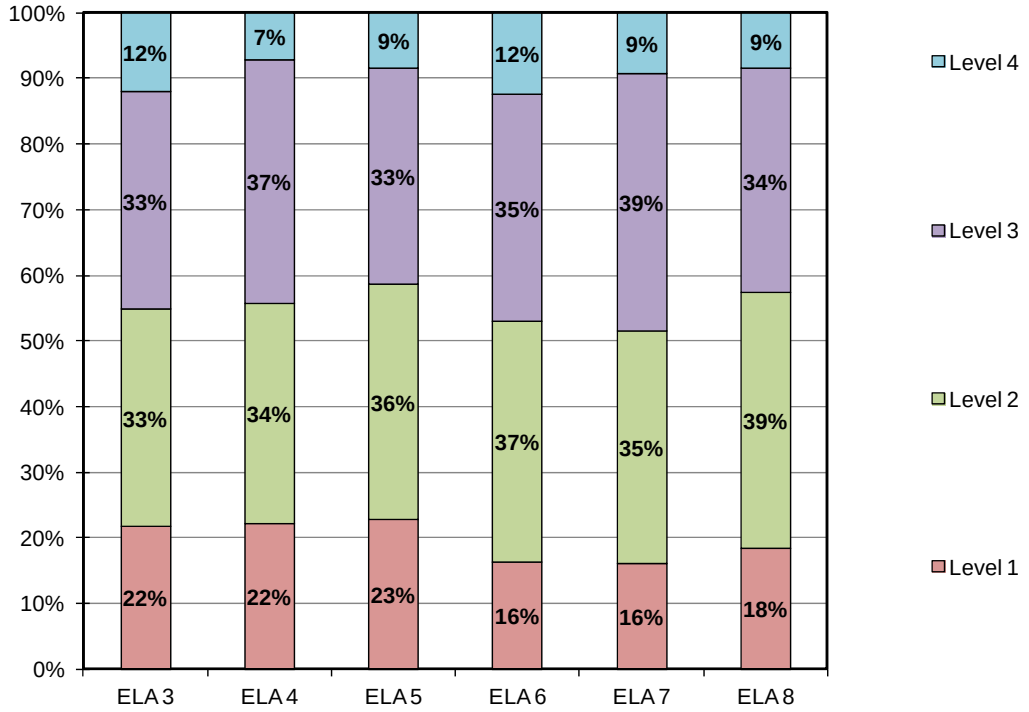


Figure 6. Post-Vertical Articulation Impact Data: Reading 3-8

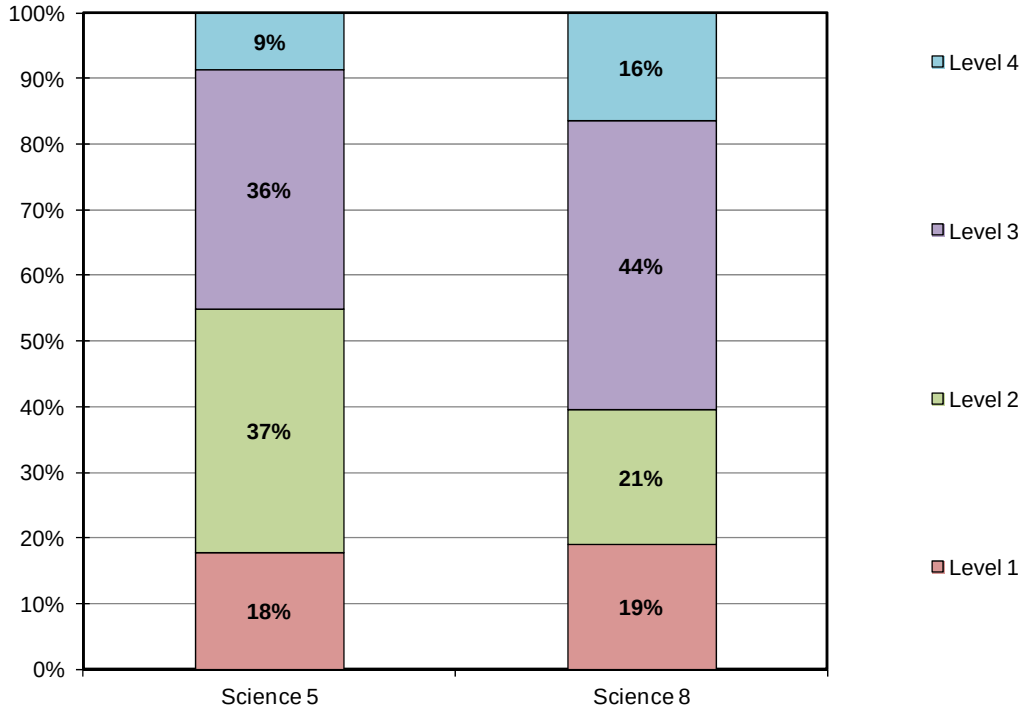


Figure 7. Post -Vertical Articulation Impact Data: Science 5 and 8

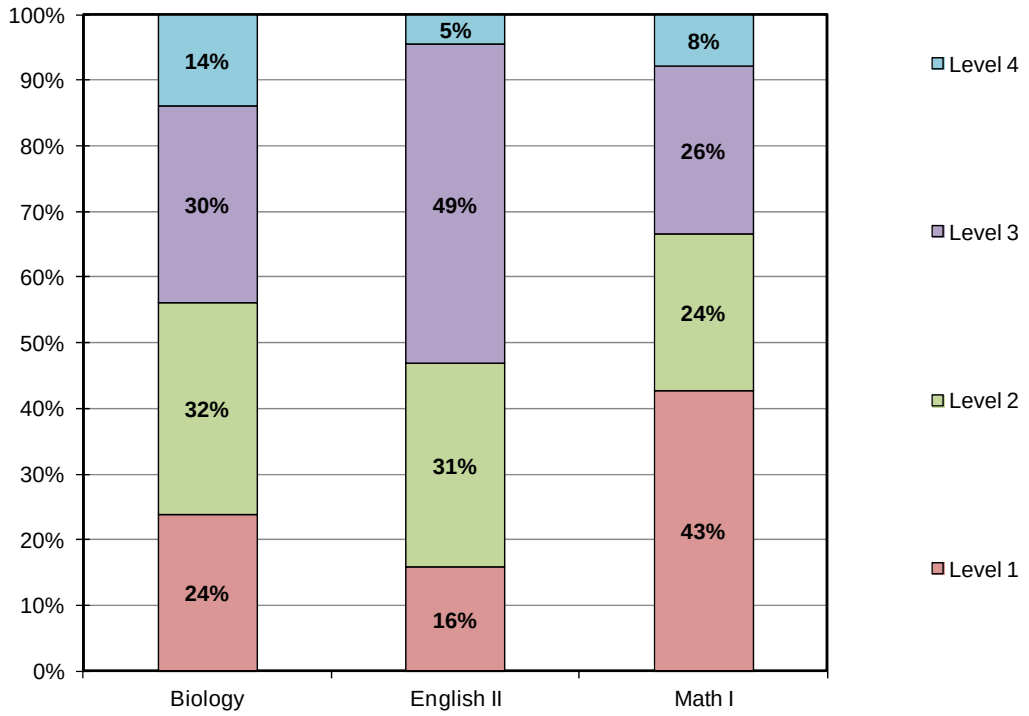


Figure 8. Post -Vertical Articulation Impact Data: EOC

Members of the vertical articulation committee completed evaluation surveys at the conclusion of the vertical articulation session. Evaluation survey responses are provided in Appendix P.

Validity of the Standard Setting

At the completion of the standard-setting meeting, an internal evaluation of the overall standard setting process was conducted. This evaluation was facilitated using Kane's (2001) framework, calling for the evaluation of sources of procedural, internal, and external validity evidence. According to Kane, evidence is needed to support the quality of the design and implementation of the standard-setting procedure. Procedural validity was supported by evidence that the steps conducted and procedures followed are supported by national experts and research (e.g., Cizek, 2001; Lewis, Green, Mitzel, Baum, & Patz, 1998; Mitzel, Lewis, Patz, & Green, 2001) and from survey responses by the panelists. This final report summarizes the procedural evidence by detailing the process followed from the description of data collection procedures, implementation of the item-mapping method, final results, and committees' reports (formative and summative) of the process. Formative evaluations, such as readiness surveys, indicated that all standard-setting committee members understood and were adequately prepared to complete the task(s). In addition, as bolstered by the standard-setting evaluation survey presented in the results section, standard setting committees generally were confident that the cut scores they recommended aligned well with the achievement level descriptors. A second source of evidence, internal validity evidence, includes evidence of the reliability of the classifications. The standard error of the median cut scores obtained from this sample of panelists was low, with all but two of the indices less than or equal to three pages of the ordered item book, one value of four, and one value of five. As a consequence, even with a different set of raters, the cut scores would likely fall within plus-or-minus three pages of the current recommendations at all grades, subjects, and cut points with the possible exception of two, which may show slightly higher variability. In summary, the validity evidence suggests that the standard setting for the

North Carolina EOC and EOG assessments was well-designed and appropriately implemented.

References

Cizek, G. J., (2001). *Setting performance standards: Concepts, methods, and perspectives*. Mahwah, NJ: Erlbaum.

Kane, M. T. (2001). So much remains the same: Conception and status of validation in setting standards. In G. J. Cizek (Ed.), *Setting performance standards: Concepts, methods, and perspectives* (pp. 53-88). Mahwah, NJ: Erlbaum.

Lewis, D. M., Green, D. R., Mitzel, H.C., Baum, K. & Patz, R.J. (1998). The Bookmark standard setting procedure: Methodology and recent implementations. Paper presented at the annual meeting of the National Council on Measurement in Education. San Diego, CA.

Mitzel, H. C., Lewis, D. M., Patz, R. J., & Green, D. R. (2001). The Bookmark procedure: Psychological perspectives. In G. Cizek (Ed.), *Setting performance standards: Concepts, methods, and perspectives*. Mahwah, NJ: Erlbaum.

Appendix A: Agenda for Single-Grade Panels

Day 1: Wednesday, July 24

Activity	Time
Table leader training (*Table leaders only*)	8:00 – 8:45 AM
Large group kick-off meeting	9:00 – 9:30 AM
Break	9:30 – 9:45 AM
Committee introductions	9:45 – 10:00 AM
Achievement level descriptor revision training	10:00 – 10:15 AM
Achievement level descriptor revisions	10:15 AM – 12:15 PM
Lunch	12:15 – 1:00 PM
"Just barely" level descriptions	1:00 – 2:15 PM
Ordered item booklet review	2:15 – 3:15 PM
Break	3:15 – 3:30 PM
Standard setting training and practice round	3:30 – 4:15 PM
Round 1	4:15 – 5:30 PM

Day 2: Thursday, July 25

Activity	Time
Round 1 feedback and discussion	8:00 – 9:15 AM
Round 2	9:15 – 10:15 AM
Break	10:15 – 10:30 AM
Write behavioral descriptions	10:30 – 11:15 AM
Round 2 feedback and discussion	11:15 AM – 12:15 PM
Lunch	12:15 – 1:00 PM
Round 3	1:00 – 1:30 PM
Break/Collect secure materials	1:30 – 2:30 PM
Round 3 feedback and discussion	2:30 – 3:00 PM
Wrap-up and evaluations	3:00 – 3:15 PM

Day 3: Friday, July 26

Activity	Time
Vertical articulation (*Table leaders only*)	1:00 – 3:30 PM

Appendix B: Agenda for Three-Grade Panels

Day 1: Monday, July 22

Activity	Time
Table leader training (*Table leaders only*)	8:00 – 8:45 AM
Large group kick-off meeting	9:00 – 9:30 AM
Break	9:30 – 9:45 AM
Committee introductions	9:45 – 10:00 AM
Achievement level descriptor revision training	10:00 – 10:15 AM
Achievement level descriptor revisions – LOWER GRADE	10:15 AM – 12:15 PM
Lunch	12:15 – 1:15 PM
Achievement level descriptor revisions – MIDDLE GRADE	1:15 – 3:15 PM
Break	3:15 – 3:30 PM
Achievement level descriptor revisions – UPPER GRADE	3:30 – 5:30 PM
NCDPI/Pearson debrief meeting	5:45 – 6:15 PM

Day 2: Tuesday, July 23

Activity	Time
"Just barely" level descriptions – LOWER GRADE	8:00 – 9:15 AM
Ordered item booklet review – LOWER GRADE	9:15 – 10:15 AM
Break	10:15 – 10:30 AM
Standard setting training and practice round	10:30 – 11:15 AM
Round 1 – LOWER GRADE	11:15 AM – 12:30 PM
Lunch	12:30 PM – 1:30 PM
Write behavioral descriptions – LOWER GRADE	1:30 – 2:15 PM
Round 1 feedback and discussion – LOWER GRADE	2:15 – 3:30 PM
Break	3:30 – 3:45 PM
Round 2 – LOWER GRADE	3:45 – 4:45 PM
NCDPI/Pearson debrief meeting	5:00 – 5:30 PM

Day 3: Wednesday, July 24

Activity	Time
Round 2 feedback and discussion – LOWER GRADE	8:00 – 9:00 AM
Round 3 – LOWER GRADE	9:00 – 9:30 AM
"Just barely" level descriptions – MIDDLE GRADE	9:30 – 10:45 AM
Round 3 feedback and discussion – LOWER GRADE	10:45 – 11:15 AM
Ordered item booklet review – MIDDLE GRADE	11:15 AM – 12:15 PM
Lunch	12:15 – 1:00 PM
Round 1 – MIDDLE GRADE	1:00 – 2:15 PM
Write behavioral descriptions – MIDDLE GRADE	2:15 – 3:00 PM
Break	3:00 – 3:15 PM
Round 1 feedback and discussion – MIDDLE GRADE	3:15 – 4:30 PM
Round 2 – MIDDLE GRADE	4:30 – 5:30 PM
NCDPI/Pearson debrief meeting	5:45 – 6:15 PM

Appendix B

Day 4: Thursday, July 25

Activity	Time
Round 2 feedback and discussion – MIDDLE GRADE	8:00 – 9:00 AM
Round 3 – MIDDLE GRADE	9:00 – 9:30 AM
"Just barely" level descriptions – UPPER GRADE	9:30 – 10:45 AM
Round 3 feedback and discussion – MIDDLE GRADE	10:45 – 11:15 AM
Ordered item booklet review – UPPER GRADE	11:15 AM – 12:15 PM
Lunch	12:15 – 1:00 PM
Round 1 – UPPER GRADE	1:00 – 2:15 PM
Write behavioral descriptions – UPPER GRADE	2:15 – 3:00 PM
Break	3:00 – 3:15 PM
Round 1 feedback and discussion – UPPER GRADE	3:15 – 4:30 PM
Round 2 – UPPER GRADE	4:30 – 5:30 PM
NCDPI/Pearson debrief meeting	5:45 – 6:15 PM

Day 5: Friday, July 26

Activity	Time
Round 2 feedback and discussion – UPPER GRADE	8:00 – 9:00 AM
Round 3 – UPPER GRADE	9:00 – 9:30 AM
Break/Collect secure materials	9:30 – 10:30 AM
Round 3 feedback and discussion – UPPER GRADE	10:30 – 11:00 AM
Wrap-up and evaluations	11:00 – 11:15 AM
Lunch	11:15 AM – 1:00 PM
Vertical articulation (*Table leaders only*)	1:00 – 3:30 PM

Appendix C: Initial Achievement Level Descriptors

Grades 3–8
English Language Arts

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts assessed at their grade level and are academically *well prepared to engage successfully* in further studies in this content area.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts assessed at their grade level and are academically *prepared to engage successfully* in further studies in this content area.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts assessed at their grade level and *will likely need academic support to engage successfully* in further studies in this content area.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts assessed at their grade level and *will need academic support to engage successfully* in further studies in this content area.

Appendix C

Grades 3–8 Mathematics

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics assessed at their grade level and are academically *well prepared to engage successfully* in further studies in this content area.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics assessed at their grade level and are academically *prepared to engage successfully* in further studies in this content area.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics arts assessed at their grade level and *will likely need academic support to engage successfully* in further studies in this content area.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics assessed at their grade level and *will need academic support to engage successfully* in further studies in this content area.

Grades 5 and 8
Science

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science assessed at their grade level and are academically *well prepared to engage successfully* in further studies in this content area.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science assessed at their grade level and are academically *prepared to engage successfully* in further studies in this content area.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science assessed at their grade level and *will likely need academic support to engage successfully* in further studies in this content area.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science assessed at their grade level and *will need academic support to engage successfully* in further studies in this content area.

Appendix C

High School Biology

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science as assessed at the end of Biology and are academically well prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year Science courses without the need for remediation.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science as assessed at the end of Biology and are academically prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year Science courses without the need for remediation.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science as assessed at the end of Biology and will likely need academic support to engage successfully in more rigorous studies in this content area. They *will likely need continued academic support to become prepared to engage successfully* in credit-bearing, first-year Science courses without the need for remediation.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the North Carolina Essential Standards (*ES*) for Science as assessed at the end of Biology and will need academic support to engage successfully in more rigorous studies in this content area. They *will need continued academic support to become prepared to engage successfully* in credit-bearing, first-year Science courses without the need for remediation.

High School English II

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts as assessed at the end of English II and are academically well prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year English courses or introductory courses requiring college-level reading in a range of disciplines, such as history or the social sciences, without the need for remediation.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts as assessed at the end of English II and are academically prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year English courses or introductory courses requiring college-level reading in a range of disciplines, such as history or the social sciences, without the need for remediation.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts as assessed at the end of English II and will likely need academic support to engage successfully in more rigorous studies in this content area. They *will likely need continued academic support to become prepared to engage successfully* in credit-bearing, first-year English courses or introductory courses requiring college-level reading in a range of disciplines, such as history or the social sciences, without the need for remediation.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for English/language arts as assessed at the end of English II and will need academic support to engage successfully in more rigorous studies in this content area. They *will need continued academic support to become prepared to engage successfully* in credit-bearing, first-year English courses or introductory courses requiring college-level reading in a range of disciplines, such as history or the social sciences, without the need for remediation.

Appendix C

High School
Algebra I/Integrated I

Level 4: Students performing at this level have a **superior command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics as assessed at the end of Algebra I/Integrated I and are academically well prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year Mathematics courses without the need for remediation.

Level 3: Students performing at this level have a **solid command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics as assessed at the end of Algebra I/Integrated I and are academically prepared to engage successfully in more rigorous studies in this content area. They are *on-track to become academically prepared to engage successfully* in credit-bearing, first-year Mathematics courses without the need for remediation.

Level 2: Students performing at this level have a **partial command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics as assessed at the end of Algebra I/Integrated I and will likely need academic support to engage successfully in more rigorous studies in this content area. They *will likely need continued academic support to become prepared to engage successfully* in credit-bearing, first-year Mathematics courses without the need for remediation.

Level 1: Students performing at this level have a **limited command** of the knowledge and skills contained in the Common Core State Standards (*CCSS*) for Mathematics as assessed at the end of Algebra I/Integrated I and will need academic support to engage successfully in more rigorous studies in this content area. They *will need continued academic support to become prepared to engage successfully* in credit-bearing, first-year Mathematics courses without the need for remediation.

Appendix D: Achievement Level Descriptors

Achievement Level Descriptors: Mathematics 3

Level 1

Operations and Algebraic Thinking

- Multiply 0, 1, 2, 5, and 10 using concrete and pictorial models.
- Read equations from left to right (independent of understanding order of operations).
- Answer questions with unknown products but with known factors.

Geometry

- Identify quadrilateral shapes.
- Draw examples of quadrilateral shapes.
- Recognize that quadrilaterals are closed figures.
- Equally partition shapes.

Number and Operations in Base 10

- Limited use of place value to add, subtract, and multiply numbers when the operation is given.

Fractions

- Identify and represent fractions using a visual fraction model.

Measurement and Data

- Tell, write, and measure intervals of time to nearest half hour and hour.
- Solve single step word problems involving addition and subtraction in one hour intervals (example representing on a number line).
- Determine the appropriate standard unit g, kg, l to measure liquid volume and mass of objects.
- Solve single step word problems using addition, subtraction, multiplication, division within the same units with picture representation.
- Read and interpret data on a scale picture graph and bar graph with a scale of 1:1 correspondence.
- Students can generate measurement data by measuring lengths using rulers marked with whole inches.
- Show data by making a line plot using whole inches.
- Recognize a unit square to measure area.
- Calculate the perimeter of regular shapes given side lengths.

Level 2

Operations and Algebraic Thinking

- Consistently multiply when one factor is 1, 2, 5 10 and 0.
- Solve one step word problems with at least one strategy.
- Apply properties of order of operations using parentheses.
- Determine an unknown factor or product in a multiplication equation.

Geometry

- Describe and identify quadrilateral shapes.
- Draw both examples and some non-examples of quadrilateral shapes.
- Partition and label unit fractions of halves, fourths, and eighths of shapes.

Number and Operations in Base 10

- Uses place value and recognizes properties of operations to add, subtract, and multiply when the operation is given.

Fractions

- Identify and represent fractions, recognize equivalent fractions, and compare using a visual fraction model.

Measurement and Data

- Tell, write, and measure time intervals to the nearest quarter hour.
- Solve single step word problems involving addition and subtraction in five minute intervals within the same hour.
- Measure and estimate using comparisons to known masses and liquids using g, kg, l.
- Solve single step word problems using addition, subtraction, multiplication, and division within the same unit.
- Draw read, and interpret data on a scale picture graph and bar graph with a scale of 1:5 correspondence.
- Generate measurement data by measuring length using rulers marked with whole and half inches.
- Show data by making line plot with whole and half inches.
- Recognize and use a unit square to measure area.
- Calculate the perimeter of regular and complex shapes given side lengths.
- Solve with one missing side length of a regular shape given the perimeter.

Level 3

Operations and Algebraic Thinking

- Compare and/or use a variety of strategies to multiply\divide two one-digit numbers.
- Compare and/or use a variety of strategies to divide within a hundred.
- Solve two step word problems using any operation.
- Apply properties to consistently solve order of operations with or without parentheses.
- Determine any unknown in a multiplication or division problem within a hundred when both factors are single digit.

Geometry

- Identify attributes and categorize quadrilaterals.
- Compare and contrast attributes of quadrilaterals.
- Partition any shape and identify areas as within halves, fourths, eighths, thirds and sixths.

Number and Operations in Base 10

- Understands and uses place value in properties of operation to add, subtract within one thousand and multiply one-digit numbers by multiples of 10

Fractions

- Identify and represent fractions, recognize equivalent fractions, and use reasoning to compare fractions.

Measurement and Data

- Tell, write, and measure time intervals to the nearest minute.
- Can solve single step word problems involving addition and subtraction to the nearest minute within the same hour.
- Measure and estimate masses and liquids using g, kg, and l.
- Solve single step word problems using addition, subtraction, multiplication, and division.
- Draw a scale picture graph and bar graph to represent a data set with several categories.
- Generate measurement data by measuring lengths using rulers with half and fourth of an inch.
- Show data by making a line plot with whole, halves, and fourths.
- Measure areas using square units and relate to multiplication and addition.
- Solve real world problems involving perimeters of polygons with one missing side of regular and complex shapes.

Level 4

Operations and Algebraic Thinking

- Compare and use efficient strategies to multiply two one-digit numbers.
- Use real world application in problem solving.
- Solve multi step problems using any operation.
- Determine any unknown in a multiplication or division problem within a hundred when both factors are single digit in real world application.

Geometry

- Compare and contrast attributes of all shapes.
- Partition shapes with non- congruent but equal areas and identify the areas as fractional units.

Number and Operations in Base 10

- Understands and uses place value and properties of operations to fluently add and subtract within one thousand and multiply one digit numbers by multiples of 10.

Fractions

- Identify and represent fractions, recognize and generate equivalent fractions, use reasoning to justify a comparison between fractions.

Measurement and Data

- Tell, write and measure time intervals to nearest minute across hours.
- Solve multi step word problems beyond the hour.
- Generate and compare a scale picture graph and scale bar graph to represent a data set.
- Independently generate and use measurement data by measuring lengths using rulers marked with whole, half, and fourths.
- Find areas of rectilinear figures by decomposing them into non-overlapping rectangles.
- Solve real word problem involving perimeters of polygons with multiple missing sides.

Appendix D

Achievement Level Descriptors: Mathematics 4

Level 1

Operations and Algebraic Thinking

- Solve basic multiplication problems.
- Solve multi step problems when given the same operation.
- Find all factor pairs for a whole number in the range of 1-25.
- Extend a pattern given a rule.

Geometry

- Identify and draw points on lines, lines segments, rays, and angles.
- Identify angles as right, acute, or obtuse.
- Identify lines of symmetry in two dimensional shapes when given examples and non-examples.

Number and Operations in Base 10

- Recognize multi digit whole numbers using base 10 numerals, number names, and expanded form limited to the thousands place.
- Limited use of place value and properties of operations to add, subtract, multiply, and divide independent of regrouping.

Fractions

- Compare and recognize two fractions with different numerators and denominators using a visual model.
- Decompose fractions in to unit fractions.
- Add and subtract with like denominators.
- Multiply a whole number by a unit fraction.
- Use decimal notations for fractions with denominators of 10 or 100.
- Compare two decimals expressed to the same place value (1/10 compared to 2/10).

Measurement and Data

- Identify relative sizes of standard and customary measurements and recognize basic equivalent measurements (1:1 ratio).
- Solve single step word problems using whole numbers with a model/picture.
- Solve area and perimeter problems in isolation.
- Make a line plot using whole number and half increments and solve single step addition and subtraction problems.
- Identify and read angles as right, obtuse, straight and acute with a protractor.

Level 2

Operations and Algebraic Thinking

- Represent a verbal statement as a multiplication equation.
- Solve a two step word problem using all four operations.
- Find all factor pairs for a whole number in the range of 1-50.
- Create a number or shape pattern that follows a given rule.

Geometry

- Identify and draw parallel and perpendicular lines.
- Identify shapes with right, acute, and/or obtuse angles.
- Identify right triangles as a separate category.
- Draw a line of symmetry in a two dimensional shape.

Number and Operations in Base 10

- Limited recognition of multi digit number where one place represents ten times the place to its right.
- Read and write multi digit base 10 numerals, number names, and expanded form limited to the thousands place.
- Use place value and properties of operations to add and subtract.
- Use place value and properties of operation to multiply or divide two digit by one

digit numbers using equations, arrays, or area model.

Fractions

- Recognize and generate equivalent fractions using visual fraction models.
- Compare two fractions with different numerators and denominators to a benchmark fraction using visual models.
- Decompose fractions.
- Add and subtract mixed numbers with like denominators independent of regrouping.
- Limited in solving word problems involving addition and subtraction using visual fraction models.
- Multiply a whole number by a unit fraction.
- Solve single step word problems involving whole numbers times fractions.
- Use decimal notation for fractions with denominators of 10 and 100.

Measurement and Data

- Identify relative sizes of standard and customary measurements and complete the pattern of a conversion table.
- Solve single step word problems using whole numbers.
- Solve real world area or perimeter problems with known factors.
- Make a line plot using whole number, half increments, and one fourth increments and solve single step addition and subtraction problems.
- Identify and draw angles as right, obtuse, straight, and acute using a protractor.

Level 3

Operations and Algebraic Thinking

- Interpret a multiplication equation as a comparison.
- Represent verbal statements of multiplicative comparisons as multiplication equations.
- Solve multi step word problems using all four operations and a variable.
- Correctly interpret remainders.
- Determine if a whole number is prime or composite.
- Find all factor pairs for a whole number in the range of 1-100.
- Identify and generate a number or shape pattern that follows a given rule and analyze the features of the pattern.

Geometry

- Identify within shapes lines segments, rays, angles, perpendicular, and parallel lines.
- Draw and classify shapes with acute, obtuse, and right angles.
- Draw and classify shapes with parallel and perpendicular lines.
- Identify line symmetric shapes and identify multiple lines of symmetry.

Number and Operations in Base 10

- Number and Operations in Base 10
- Read, write, and compare multi digit base 10 numerals, number names, and expanded form up to a million.
- Recognize multi digit numbers where one place represents ten times the place to its right.
- Use place value and properties of operations to add and subtract using the standard algorithm.
- Use place value and properties of operation to multiply (two digit by two digit and four digit by one digit) using equations, arrays, or area model.
- Use place value and properties of operation to divide, including remainders, (of four digit by one digit) using equations, arrays, or area model.

Fractions

- Add and subtract mixed numbers with like denominators.
- Solve word problems involving addition and subtraction of fractions.
- Find an equivalent fraction to a mixed number.

- Express a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100.
- Understand decimal notation for fractions and compare decimals to fractions.

Measurement and Data

- Identify relative sizes of standard and customary measurements and generate conversions within the same system.
- Use multiplication, division, addition, subtraction to solve word problems using whole numbers and parts of wholes.
- Solve real world area and perimeter word problems including unknown factors.
- Make a line plot using whole numbers, half, fourth, and eighth increments and solve single step addition and subtraction problems.
- Recognize the composition of angles, accurately use a protractor to measure, add and subtract to solve word problems by composing and decomposing angles.

Level 4

Operations and Algebraic Thinking

- Interpret, represent, and solve a multiplicative comparison embedded in a real world problem and assess reasonableness of answer using mental computations, estimation, and rounding.
- Find all factor pairs of 1-100 and justify reasoning.
- Identify the rule of a given pattern.

Geometry

- Draw build and/or identify shapes when given specific attributes (e.g., line segments, rays, angles, perpendicular, parallel line).
- Use a line of symmetry to complete a partially drawn figure.

Number and Operations in Base 10

- Recognize multi digit numbers where one place represents ten times the place to its right up to a million.
- Interchange between different forms of numbers (standard, word, and expanded form) when comparing multi digit whole numbers.
- Use place value and properties of operation to fluently add and subtract using the standard algorithm.
- Use place value and properties of operation to multiply (of four digit by one digit and two digit by two digit) and divide, including remainders, (of four digit by one digit) using equations, arrays, and area model.

Fractions

- Understand and justify comparing two fractions with different numerators and different denominators.
- Understand and justify the comparison of two decimals to the hundredths by reasoning about their size.

Measurement and Data

- Identify relative sizes of standard and customary measurements and generate and apply conversions.
- Solve multi step real world area and perimeter word problems including unknown factors.
- Make and interpret data from a line plot using whole, half, fourth, and eighth number increments and solve addition and subtraction problems.
- Apply the properties of angles to solve real world problems.

Achievement Level Descriptors: Mathematics 5

Level 1

Operations and Algebraic Thinking

- Solve simple numeric expressions.
- Extend basic numerical patterns.

Geometry

- Identify points on the coordinate plane (first quadrant)
- Sort two dimensional figures by one attribute, using manipulatives or models.

Number and Operations in Base 10

- Recognize that a digit in one place represents ten times as much as it represents when it is placed to the right.
- Compare two decimals to the tenths place.
- Use place value to round a decimal to the nearest whole number.
- Fluently multiply whole numbers up to two digits by two digits.
- Find whole number quotients in problems up to three digits by one digit.

Fractions

- Add and subtract with like denominators.

Measurement and Data

- Convert whole numbers within a single system to solve single step real world problems.
- Make a line plot using whole and one half increments and solve addition, subtraction, multiplication, and division problems.
- Identify volume using unit cubes to fill objects and/or the standard formula (Length x width x height) to solve real world problems.

Level 2

Operations and Algebraic Thinking

- Solve numerical expressions using basic order of operations using parentheses, but excluding brackets and braces.
- Interpret rules for two numerical patterns using two given rules.

Geometry

- Graph points on the coordinate plane (first quadrant).
- List attributes of a given two dimensional shape.
- Sort two dimensional shapes by two attributes, using manipulatives or models.

Number and Operations in Base 10

- Recognize that a digit in one place represents one tenth of what it represents in the place to its left.
- Explain patterns in the number of zeros of the product when multiplying a number by powers of ten.
- Read and write decimals to the tenths place using base 10 numerals, number names, and expanded form.
- Compare two decimals to the hundredths place.
- Use place value understanding to round decimals to the hundredths place.
- Multiply whole numbers using the standard algorithm up to three digits by three digits.
- Divide whole numbers up to four digits by one digit; illustrate and explain using equations, rectangular arrays or area models.

Fractions

- Add and subtract with unlike denominators using mathematical and real world problems.
- Add mixed numbers with unlike denominators using mathematical and real world problems.

- Recognize a fraction as the division of the numerator by the denominator.
- Find the area of a rectangle with fractional side length by tiling.
- Solve word problems by multiplying fractions independent of mixed numbers.

Measurement and Data

- Convert whole numbers and decimals in a single system and solve single step real world problems or whole numbers with multi step problems.
- Make a line plot using whole, one half, and one fourth increments and solve addition, subtraction, multiplication, and division problems.
- Use unit cubes to construct solid rectangular prisms to find volume and build understanding of the formula (L x W x H).

Level 3

Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Evaluate expressions with parentheses, brackets, or braces.
- Generate two numerical patterns using two given rules and graph on a coordinate plane.

Geometry

- Graph points on the coordinate plane (first quadrant) to solve real world and mathematical problems.
- Classify two dimensional figures into categories and subcategories based on their properties.

Number and Operations in Base 10

- Explain patterns in the placement of the decimal point when a decimal is multiplied by the power of ten.
- Use whole number exponents to denote powers of ten.
- Read, write, compare, and round decimals to the thousandths place.
- Multiply multi digit whole numbers using the standard algorithm.
- Divide whole numbers up to four digits by one digit; illustrate and explain using equations, rectangular arrays and area models.
- Add, subtract, multiply, and divide decimals to the hundredths place using concrete models, drawings, or other strategies.

Fractions

- Solve word problems by multiplying fractions and mixed numbers.
- Add and subtract with unlike denominators including mixed numbers using mathematical and real world problems.
- Solve word problems by dividing whole numbers, leading to fraction and mixed number quotients.
- Find the product of a whole number and a fraction.
- Multiply fractional side lengths to find area.
- Know a fraction times a number greater than one is greater than the given number.
- Know a fraction times a number less than one is less than the given number.
- Interpret division of a whole number by a fraction and compute.
- Interpret division of a unit fraction by a whole number and compute.
- Solve real world problems involving the division of fractions by whole numbers and whole numbers by fractions.

Measurement and Data

- Use and convert units within a given measurement system to solve a multi step real world problems.
- Make a line plot using whole, one half, one fourth, and one eighth increments and solve addition, subtraction, multiplication, and division problems.
- Measure volume by counting the cubes and apply the formula to solving real world problems.

Level 4

Operations and Algebraic Thinking

- Use expressions that include brackets, braces, and parentheses to problem solve.
- Interpret data by using patterns on a coordinate plane.

Geometry

- Graph points on the coordinate plane (first quadrant) and analyze to solve real world and mathematical problems.
- Reposition an object on the coordinate plane (first quadrant) by using cardinal direction.
- Justify and explain reasoning of classification of two dimensional shapes.

Number and Operations in Base 10

- Fluently recognize, explain, read, write, and compare numbers in the place value system millions through thousandths.
- Consistently add, subtract, multiply, and divide multi digit whole numbers and decimals to the hundredths; explain using reasoning.

Fractions

- Explain the relationship between multiplication and division of fractions by whole numbers.

Measurement and Data

- Generate and apply measurement conversion to multi step real world problems within and across systems.
- Make and interpret data from a line plot using wholes, one half, one fourth, and one eighth and solve addition, subtraction, multiplication, and division problems.
- Construct solid figures to demonstrate an understanding of volume and explain the relationship to the formula.

Appendix D

Achievement Level Descriptors: Mathematics 6

Level 1
Number systems • Have limited command and understanding while dividing fractions, finding common multiples/GCF, and working with the rational numbers system. Geometry • Show limited understanding of real world and mathematical problems involving area, surface area and volume. Expressions and equations • Show limited understanding to read and/or write numerical/algebraic expressions, equations, or inequalities and the relationship between dependent and independent variables. Ratios and proportion • Limited command of the concept of a ratio, unit rate, and equivalent ratios. Statistics and probability • Limited understanding and recognition of statistical questions and variability in numerical data.
Level 2
Number systems • Show understanding when dividing fractions, finding common multiples/GCF, and working with the rational numbers system. Geometry • Show understanding and application of basic principles when solving real world and mathematical problems involving area, surface area and volume. Expressions and equations • Show some understanding to read and/or write numerical/algebraic expressions, equations, or inequalities and the relationship between dependent and independent variables. Ratios and proportion • Understand the concept of a ratio, unit rate, equivalent ratios, and use rate language as well as complete tables with missing values. Statistics and probability • Show some recognition, understanding, and summarizing statistical questions and numerical data; limited understanding of variability in data.
Level 3
Number systems • Understand, apply, and extend prior knowledge while dividing fractions, finding common multiples/GCF, and with the rational numbers system. Geometry • Show understanding, application, and extension of geometric principles when solving real world and mathematical problems involving area, surface area and volume. Expressions and equations • Show understanding to read, write, and evaluate numerical/algebraic expressions, equations, or inequalities and interpret the relationship between dependent and independent variables. Ratios and proportion • Understand and apply the concept of a ratio, unit rate, equivalent ratios, and apply rate language as well as complete tables with missing values, use tables to compare values and solve problems involving finding the whole given a part and/or a percent. Statistics and probability

- Recognize, understand, and summarize the statistical questions, anticipates variability in the data. Describe the attributes using age appropriate vocabulary.

Level 4

Number systems

- Understand, apply, and extend prior knowledge while computing fluently with dividing fractions, common multiples/GCF, and with the rational numbers system.

Geometry

- Show understanding, application, extension, and fluent computation of geometric principles when solving real world and mathematical problems involving area, surface area and volume.

Expressions and equations

- Show full understanding to read, write, and analyze numerical/algebraic expressions, equations, or inequalities and interpret the relationship between dependent and independent variables.

Ratios and proportion

- Shows full understanding of the concept of a ratio, unit rate, equivalent ratios, and apply appropriate rate language as well as complete tables with missing values, make tables relating quantities with whole number measures and solve problems involving finding the whole given a part and/or a percent including unit pricing and constant speed. Graph on a coordinate plane.

Statistics and probability

- Shows full understanding by analyzing and summarizing statistical questions; anticipates variability in the data, and describe the attributes using age appropriate vocabulary.

Appendix D

Achievement Level Descriptors: Mathematics 7

Level 1
Number systems • Students understand the four operations and have limited or no understanding of rational numbers. Geometry • Recognize the geometric properties of two-and three-dimensional figures. Expressions and equations • Students show a limited understanding of properties of operations and limited ability to generate and solve real life multi-step numerical and algebraic expressions, equations and inequalities. Ratios and proportion • Shows limited understanding of concepts to recognize proportional relationships, unit rate and constant of proportionality. Statistics and probability • Limited use of random sampling to generate a data set and make inferences about a population; limited use of probability models and the ability to compare them.
Level 2
Number systems • Students have limited understanding of how to apply and solve real-world mathematical problems involving the four operations and all rational numbers. Geometry • Recognize and apply the geometric properties of two-and three-dimensional figures. Expressions and equations • Students show a partial understanding of properties of operations and partial ability to generate and solve real life multi-step numerical and algebraic expressions, equations and inequalities. Ratios and proportion • Shows some understanding of concepts to recognize proportional relationships, unit rate and constant of proportionality. Statistics and probability • Some use of random sampling to generate a data set and make inferences about a population; use of probability models and the ability to compare them.
Level 3
Number systems • Students analyze and solve real-world mathematical problems involving the four operations and all rational numbers. Geometry • Students recognize, draw, construct, and apply the appropriate properties and formulas when working with two- and three-dimensional figures. Expressions and equations • Students show a solid command demonstrated by the ability to apply properties of operations to generate equivalent expressions and solve real life multi-step numerical and algebraic expressions, equations and inequalities. Ratios and Proportion • Shows understanding of concepts to analyze and represent real world and mathematical problems using proportional relationships, unit rate and constant of proportionality. Statistics and Probability • Uses random sampling to generate data sets, make inferences, and compare two

different populations; develop, use, and compare probability models.

Level 4

Number systems

- Students fluently analyze, solve, and create real-world mathematical problems involving the four operations and all rational numbers.

Geometry

- Students recognize, draw, construct, evaluate, and fluently apply the appropriate properties and formulas when solving real world mathematical problems involving two- and three-dimensional figures.

Expressions and equations

- Consistently and fluently apply properties of operations to generate equivalent expressions and solve real life multi-step numerical and algebraic expressions, equations and inequalities.

Ratios and proportion

- Shows full understanding of concepts to analyze, apply and represent real world and mathematical problems using proportional relationships, unit rate and constant of proportionality.

Statistics and probability

- Uses random sampling to generate data sets, make inferences, and make predictions about two different populations; develop, use, compare, and evaluate probability models.

Appendix D

Achievement Level Descriptors: Mathematics 8

Level 1
Number systems • Students know numbers can be irrational or rational. Geometry • Recognize that figures are congruent and/or similar, recognize the Pythagorean Theorem, and recognize the properties associated with 2d and 3d figures. Expressions and equations • Limited understanding of: (1) applying and performing operations with radicals, integer exponents and scientific notation; (2) graphing, interpreting and comparing proportional relationships, lines and linear equations; (3) using similar triangles to explain slope; (4) analyzing and solving linear equations and pairs of simultaneous linear equations. Functions • Limited understanding of function as a rule with exactly one output. Statistics and probability • Construct scatter plots and limited understanding of variables
Level 2
Number systems • Students can distinguish between irrational and rational numbers. Geometry • Recognize similarity and/or congruency, know and apply the Pythagorean Theorem and volume using given measurements. Expressions and equations • Some understanding of: (1) applying and performing operations with radicals, integer exponents and scientific notation; (2) graphing, interpreting and comparing proportional relationships, lines and linear equations; (3) using similar triangles to explain slope; (4) analyzing and solving linear equations and pairs of simultaneous linear equations. Functions • Define and recognize functions represented in different forms. Statistics and probability • Construct scatter plots with some understanding of relationships of bivariate data.
Level 3
Number systems • Students can identify rational and irrational numbers, and can evaluate irrational using rational approximation. Geometry • Analyze 2d and 3d space and figures using distance, angles, similarity, and congruency; understand and apply the Pythagorean Theorem. Expressions and equations • (1) Know, apply and perform operations with radicals, integer exponents and scientific notation. (2) Graph, interpret and compare proportional relationships, lines and linear equations. (3) Use similar triangles to explain slope. (4) Analyze and solve linear equations and pairs of simultaneous linear equations. Functions • Define, describe, evaluate and compare functions represented in different forms. Statistics and Probability • Investigate, explain, compare, and evaluate patterns of associations in bivariate data.

Level 4
Number systems • Students can identify rational and irrational numbers, evaluate irrational using rational approximation, and use these approximations to compare and order. Geometry • Analyze, construct, and explain 2d and 3d space and figures using distance, angles, similarity, and congruency; understand, apply, and explain the Pythagorean Theorem. Expressions and equations • Full understanding of: (1) applying and performing operations with radicals, integer exponents and scientific notation; (2) graphing, interpreting and comparing proportional relationships, lines and linear equations; (3) using similar triangles to explain slope; (4) analyzing and solving linear equations and pairs of simultaneous linear equations. Functions • Describe, compare, evaluate, and analyze functions to model relationships between quantities. Statistics and probability • Investigate, compare, and predict patterns of associations in bivariate data.

Appendix D

Achievement Level Descriptors: Reading 3

Level 1
• Students performing at this level have a limited command of the knowledge and skills contained in the CCSS as assessed by: identifying and recounting key ideas and details within texts, using text structure to determine meaning, and comparing and contrasting story elements within and between texts; and will need academic support to engage successfully in further studies in this content area • Students performing at this level have a limited command of informational text by inconsistently locating key ideas, recognizing the point of view, comparing/contrasting simple texts and rarely recognizing/identifying grade level specific vocabulary • Students performing at this level demonstrate a limited command of language when interpreting the meaning of unknown words and phrases, understanding how words are related and have multiple meanings; students rarely demonstrate the use of grade appropriate vocabulary and will need academic support to engage successfully in this content area.
Level 2
• Students performing at this level have partial command of the knowledge and skills contained in the CCSS as assessed by: identifying and recounting key ideas and details within texts, using text structure to determine meaning, and comparing and contrasting story elements within and between texts; and will likely need academic support to engage successfully in further studies in this content area. • Students performing at this level have a partial command of informational text by inconsistently identifying key ideas, determining the point of view, comparing and contrasting two informational texts, and recognizing grade level specific vocabulary • Students performing at this level demonstrate a partial command of language when interpreting the meaning of unknown words and phrases, understanding how words are related and have multiple meanings; students demonstrate inconsistent use of grade appropriate vocabulary; students will likely need academic support to engage successfully in this content area
Level 3
• Students performing at this level have solid command of the knowledge and skills contained in the CCSS as assessed by: identifying and recounting key ideas and details within texts, using text structure to determine meaning, and comparing and contrasting story elements within and between texts; and are academically prepared to engage successfully in further studies in this content area. • Students performing at this level have a solid command of informational text by consistently determining key ideas, distinguishing their own point of view, compare and contrast information from two texts, and determine the meaning of grade level specific vocabulary • Students performing at this level demonstrate a solid command of language when interpreting the meaning of unknown words and phrases, understanding how words are related and have multiple meanings; students demonstrate consistent use of grade level vocabulary and are academically prepared in this content area
Level 4
• Students performing at this level have a superior command of the knowledge and skills contained in the CCSS as assessed by: analyzing and interpreting key ideas and details within texts, evaluating text structure to determine meaning, relating and organizing story elements within and between texts; and are academically well-

prepared to engage successfully in further studies in this content area.

- Students performing at this level have a superior command of informational text by elaborating and supporting key ideas, can differentiate multiple points of view, integrate information from various texts, and apply and extend grade specific vocabulary
- Students performing at this level demonstrate superior command of language when interpreting the meaning of unknown words and phrases, evaluating how words are related and have multiple meanings; students demonstrate exemplary use of grade appropriate vocabulary and are academically well-prepared to engage successfully in this content area

Appendix D

Achievement Level Descriptors: Reading 4

Level 1
• Students performing at this level have a limited command of the knowledge and skills contained in the CCSS as assessed by: describing specific story elements when summarizing and referencing the text to determine the theme, using text structure to determine meaning, comparing and contrasting varied points of view and explaining major differences between texts, comparing and contrasting similar themes and topics through written text and visual representation of the text. Students will need academic support to successfully engage in further studies in this content area. • Students performing at this level have a limited command of informational text by rarely referring to details when drawing inferences and summarizing, identifying text structure, comparing/contrasting first/second hand accounts of simple texts and rarely recognizing grade level specific vocabulary. • Students performing at this level demonstrate a limited command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, explaining figurative language and determining word relationships as well as when consulting print and digital references. Students rarely demonstrate the use of grade appropriate vocabulary and will need academic support to engage in content at this level.
Level 2
• Students performing at this level have a partial command of the knowledge and skills contained in the CCSS as assessed by: describing specific story elements when summarizing and referencing the text to determine the theme, using text structure to determine meaning, comparing and contrasting varied points of view and explaining major differences between texts, comparing and contrasting similar themes and topics through written text and visual representation of the text. Students will likely need academic support to successfully engage in further studies in this content area. • Students performing at this level have a partial command of informational text and inconsistently refer to details when drawing inferences and summarizing, identifying text structure, comparing/contrasting first and second hand accounts and recognizing grade level specific vocabulary. • Students performing at this level demonstrate a partial command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, explaining figurative language and determining word relationships as well as when consulting print and digital references. Students inconsistently demonstrate the use of grade appropriate vocabulary and will likely need academic support to engage in content at this level.
Level 3
• Students performing at this level have a solid command of the knowledge and skills contained in the CCSS as assessed by: describing specific story elements when summarizing and referencing the text to determine the theme, using text structure to determine meaning, compare and contrast varying points of view and explaining major differences between texts, compare and contrast similar themes and topics through written text and visual representation of the text. Students are prepared to successfully engage in further studies in this content area. • Students performing at this level have a solid command of informational text by consistently referring to details when drawing inferences and summarizing, describe text structure, compare/contrast first/second hand accounts, integrating information

from two texts, and determine the meaning of grade level specific vocabulary.

- Students performing at this level demonstrate a solid command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, explaining figurative language and determining word relationships as well as when consulting print and digital references. Students consistently demonstrate the use of grade appropriate vocabulary and are academically prepared to engage in content at this level.

Level 4

- Students performing at this level have a superior command of the knowledge and skills of the CCSS as assessed by: interpreting specific story elements when summarizing and examining the text to formulate the theme, evaluating text structure to determine meaning, compare and contrast varying points of view, and justify major differences between texts, the discrimination of similar themes and topics between written text and visual representation. Students are academically well prepared to successfully engage in further studies in this content area.
- Students performing at this level have a superior command of informational text by interpreting details through summarization and making inferences, can explain text structure, elaborate on first and second hand accounts by integrating information from various texts and apply and extend grade level specific vocabulary.
- Students performing at this level demonstrate a superior command of language when determining, clarifying, and evaluating the meaning of words through the use of context clues, Greek and Latin affixes/roots, explain figurative language and determine word relationships as well as when consulting print and digital references. Students demonstrate exemplary use of grade appropriate vocabulary and are academically well-prepared to engage in content at this level.

Appendix D

Achievement Level Descriptors: Reading 5

Level 1
• Students performing at this level have a limited command of the knowledge and skills contained in the CCSS as assessed by: comparing and contrasting specific story elements to determine the theme as well as accurately quoting the text when drawing inferences, using text structure to determine word meaning including figurative language in addition to describing how events are influenced by the author's point of view, and comparing and contrasting stories in the same genre on their approaches to similar themes and topics alongside analyzing the contribution of visual and multimedia elements in the text. Students will need academic support to successfully engage in further studies in this content area. • Students performing at this level have a limited command of informational text by rarely quoting with accuracy when making inferences from a text, recalling at least two main ideas through summarizing and rarely identifying a relationship between two concepts. Students inconsistently compare and contrast two texts based on their structure and point of view, draw on information from print and digital resources to recognize author's reasons, and identify the meaning of grade level specific vocabulary. • Students performing at this level demonstrate a limited command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, interpreting figurative language and using word relationships as well as when consulting print and digital references. Students rarely demonstrate the use of grade appropriate vocabulary and will need academic support to engage in content at this level.
Level 2
• Students performing at this level have a partial command of the knowledge and skills contained in the CCSS as assessed by: comparing and contrasting specific story elements to determine the theme as well as accurately quoting the text when drawing inferences, using text structure to determine word meaning including figurative language in addition to describing how events are influenced by the author's point of view, and comparing and contrasting stories in the same genre on their approaches to similar themes and topics alongside analyzing the contribution of visual and multimedia elements in the text. Students will likely need academic support to successfully engage in further studies in this content area. • Students performing at this level have a partial command of informational text by inconsistently quoting when making inferences from a text, locating at least two main ideas through summarization and indicate a relationship between at least two concepts. Students inconsistently compare/contrast two texts based on their structure and point of view, draw on information from print and digital resources to recognize author's reasons, and identify the meaning of grade level specific vocabulary. • Students performing at this level demonstrate a partial command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, interpreting figurative language and using word relationships as well as when consulting print and digital references. Students inconsistently demonstrate the use of grade appropriate vocabulary and will likely need academic support to engage in content at this level.
Level 3
• Students performing at this level have a solid command of the knowledge and skills contained in the CCSS as assessed by: comparing and contrasting specific story

elements to determine the theme as well as accurately quoting the text when drawing inferences, using text structure to determine word meaning including figurative language in addition to describing how events are influenced by the author's point of view, and comparing and contrasting stories in the same genre on their approaches to similar themes and topics alongside analyzing the contribution of visual and multimedia elements in the text. Students are prepared to successfully engage in further studies in this content area.

- Students performing at this level have a solid command of informational text by accurately quoting when making inferences from a text, determining two or more main ideas through summarization and explaining relationships between two or more concepts. Students will compare/contrast multiple texts based on their structure and point of view, draw on information from print and digital resources to explain author's reasons and determine the meaning of grade level specific vocabulary.
- Students performing at this level demonstrate a solid command of language when determining or clarifying the meaning of words through the use of context clues, Greek and Latin affixes/roots, interpreting figurative language and using word relationships as well as when consulting print and digital references. Students consistently demonstrate the use of grade appropriate vocabulary and are academically prepared to engage in content at this level.

Level 4

- Students performing at this level have a superior command of the knowledge and skills of the CCSS as assessed by: distinguishing various story elements to determine the theme as well as justifying inferences by specifically quoting the text, evaluating text structure to determine word meaning including figurative language in addition to appraising how events are influenced by the author's point of view, and analyzing stories in the same genre on their approaches to similar themes and topics alongside evaluating the contributions of visual and multimedia elements to the text. Students are academically well prepared to successfully engage in further studies in this content area.
- Students performing at this level have a superior command of informational text by accurately quoting when making multiple inferences from a text. Justifying two or more main ideas through summarization and analyzing relationships between two or more concepts. Students will interpret the similarities and differences between multiple texts based on their structure and point of view. Generate information from multiple sources to explain author's reasons and apply and extend grade level specific vocabulary.
- Students performing at this level demonstrate a superior command of language when determining, clarifying, and evaluating the meaning of words through the use of context clues, Greek and Latin affixes/roots, interpreting figurative language and analyzing word relationships as well as when consulting print and digital references. Students demonstrate exemplary use of grade appropriate vocabulary and are academically well-prepared to engage in content at this level.

Appendix D

Achievement Level Descriptors: Reading 6

Level 1
Language • Students may recognize pronouns or convention used with non-restrictive information; students identify unknown words academic terms, figurative language, or word relationships. Reading for Information • Students recognize key details within informational text from various media sources. Reading for Literature • Students may be able to generate inferences; summarize the text; identify the theme; list the sequence of events and recognize the characters' responses to changes in plot. They may be able to determine word meaning. They may be able to recognize the theme, setting, plot and point of view. They identify different genres and styles.
Level 2
Language • Students recognize effective use of pronouns and apply conventions used with non-restrictive information; students identify unknown words, academic terms, figurative language, and word relationships. Reading for Information • Students determine and explain key details with informational text from various media sources. Reading for Literature • Students cite explicit textual evidence; summarize the text; identify the theme; list the sequence of events and explain the characters' responses to the changes in plot. They utilize context clues to determine word meaning, including figurative and connotative meaning. They explain how an excerpt contributes to the development of theme, setting, plot, and point of view. They compare and contrast different genres and styles.
Level 3
Language • Students demonstrate effective use of pronouns and apply conventions used with non-restrictive information; students clarify and interpret unknown words, academic terms, figurative language, and word relationships. Reading for Information • Students distinguish and analyze informational text by citing textual evidence that includes relevant arguments drawn from various media sources. Reading for Literature • Students make inferences by citing textual evidence; summarize the text in order to determine the theme; describe the sequence of events and explain the characters' responses to the changes in plot. They analyze how word choice affects meaning and tone and utilize context clues to determine word meaning, including figurative and connotative meaning. They analyze how an excerpt supports and contributes to the development of theme, setting, plot, and point of view. They compare and contrast different genres and styles as they relate to similar themes and topics.
Level 4
Language • Students evaluate the effective use of pronouns and apply conventions used with non-restrictive information; students manipulate unknown words, academic terms,

figurative language, and word relationships.

Reading for Information

- Students evaluate informational text by citing textual evidence and justify relevant arguments drawn from various media sources.

Reading for Literature

- Students make inferences by citing textual evidence; summarize the text in order to determine the theme; describe the sequence of events and explain the characters' responses to the changes in plot. . They evaluate how word choice affects meaning and tone and utilize context clues to determine word meaning, including figurative and connotative meaning. They interpret how an excerpt supports and contributes to the development of theme, setting, plot, and point of view. They distinguish between different genres and styles as they relate to similar themes and topics.

Appendix D

Achievement Level Descriptors: Reading 7

Level 1
Language • Students identify a variety of phrases and clauses, use commas for coordinating adjectives, and recognize precise language. Students identify unknown words, academic terms, figurative language (specifically, allusion), or analogies. Reading for Information • Students recognize details in informational text from various media sources. Reading for Literature • Students make inferences using textual evidence; summarize the text in order to recognize the theme and sequence of events; and identify narrative elements. They recall how word choice affects meaning and tone, how sound devices impact text, and describe structure and point of view. They select fictional and historical accounts of the same period.
Level 2
Language • Students identify and classify a variety of sentences by combining phrases and clauses, use commas for coordinating adjectives, and distinguish precise language. Students identify unknown words, academic terms, figurative language (specifically, allusion) and analogies. Reading for Information • Students determine and explain details in informational text by citing multiple pieces of evidence from various authors and media sources. Reading for Literature • Students cite several pieces of textual evidence; summarize the text in order to identify the theme, sequence of events, and the listing of narrative elements. They express how word choice affects meaning and tone, how sound devices impact text, and infer an author's craft in terms of structure and point of view. They identify the differences between fictional and historical accounts of the same period.
Level 3
Language • Students select the construction of a variety of sentences by combining phrases and clauses, use commas for coordinating adjectives, and demonstrate precise language. Students clarify and interpret unknown words, academic terms, figurative language (specifically, allusion), and analogies. Reading for Information • Students distinguish and analyze interactions between details in informational text by citing multiple pieces of evidence from various authors and media sources. Reading for Literature • Students make inferences by citing several pieces of textual evidence; summarize the text in order to analyze the theme, sequence of events, and the interaction of narrative elements. They analyze how word choice affects meaning and tone, how sound devices impact text, and analyze an author's craft in terms of structure and point of view. They compare and contrast fictional and historical accounts of the same period.
Level 4
Language • Students justify the construction of a variety of sentences by combining phrases and clauses, use commas for coordinating adjectives, and distinguish between precise

and imprecise language. Students manipulate unknown words, academic terms, figurative language (specifically, allusion), and analogies.

Reading for Information

- Students evaluate and justify interactions between details in informational text by assessing the relevance of multiple pieces of evidence from various authors and media sources.

Reading for Literature

- Students make inferences by citing several pieces of textual evidence; summarize the text in order to evaluate the theme, sequence of events, and the interaction of narrative elements. They evaluate how word choice affects meaning and tone, how sound devices impact text, and critique an author's craft in terms of structure and point of view. They critically assess the fictional and historical accounts of the same period.

Appendix D

Achievement Level Descriptors: Reading 8

Level 1
Language • Students may recognize verbals, verb voice, or verb mood. Students identify commas, ellipses, or dashes to indicate pauses and breaks. Students identify unknown words academic terms or figures of speech (puns and verbal irony). Reading for Information • Students recognize points of view in informational text from various authors. Reading for Literature • Students support inferences by citing textual evidence and identify the theme's development. They recognize how dialogue and incidents the plot and character development. They label word choices, including analogies or allusions. They compare and contrast the structure of multiple texts to recognize suspense or humor. They recognize similarities between modern and classic literature.
Level 2
Language • Students identify verbals, verb voice, or verb mood. Students may use commas, ellipses, or dashes to indicate pauses and breaks. Student clarify unknown words, academic terms, or figurative language (puns and verbal irony). Reading for Information • Students determine conflicting points of view in informational text from various authors. Reading for Literature • Students identify inferences by citing strong textual evidence and describe the theme's development and relationships to other literary elements. They explain how dialogue and incidents impact the plot and character development. They identify word choices, including analogies or allusions. They compare and contrast the structure of multiple texts to recognize how suspense or humor is created. They identify how a modern text draws from classic literature.
Level 3
Language • Students formulate and explain the correct use of verbals, verb voice, and verb mood. Students use commas, ellipses, and dashes to indicate pauses and breaks. Students clarify and interpret unknown words, academic terms, and figurative language (puns and verbal irony). Reading for Information • Students distinguish, analyze, and connect details in informational text that determine how the author acknowledges and responses to conflicting evidence or viewpoints. Reading for Literature • Students create inferences by citing the strongest textual evidence and analyze the theme's development and relationships to other literary elements. They analyze how dialogue and incidents progress the plot and character development. They analyze how word choice, including analogies and allusions, impact meaning and tone. They compare and contrast the structure of multiple texts to analyze the impact on meaning and style and the way suspense and humor are created. They analyze how a modern text draws from classic literature.
Level 4
Language

- Students formulate and evaluate the correct us of verbals, verb voice, and verb mood. Students justify the use of commas, ellipses, and dashes to indicate pauses and breaks. Students manipulate unknown words and academic terms and evaluate the impact of figurative language (puns and verbal irony) on selections.

Reading for Information

- Students evaluate and combine details in informational text to justify the strongest interpretation of the author's argument.

Reading for Literature

- Students construct inferences by citing the strongest textual evidence and evaluate the theme's development and relationships to other literary elements. They justify how dialogue and incidents progress the plot and character development. They critique word choice, including analogies and allusions, and their impact on meaning and tone. They distinguish between the structure of multiple texts to evaluate the impact on meaning and style and the way suspense and humor are created. They verify how a modern text draws from classic literature.

Appendix D

Achievement Level Descriptors: Science 5

Level 1

Forces and Motion
- Defines limited definitions of force and motion

Matter: Properties and Change
- Recognize and shows a limited understanding of the interactions of matter and energy.

Energy: Conservation and Transfer
- Recognize that heat transfer cause changes in materials.

Earth Systems, Structures, and Processes
- Students have limited understanding of weather data, weather phenomena and patterns that develop
- Able to make limited predictions based on data

Structures and Functions of Living Organisms
- Recognizes that cells are living organisms.
- Knows that differences exist between single cell and multi cellular organism
- Names major human body systems.

Ecosystems
- Know that there are different ecosystems and can name some examples
- Know that there are different organisms in each ecosystem and can name some examples

Evolution and Genetics
- Identify few characteristics that are inherited
- Give limited explanations of why organism differ

Level 2

Forces and Motion
- Understands relationships between force, motion. Through experiences and investigations

Matter: Properties and Change
- Explain the relationships between changes in matter and energy including the water cycle.

Energy: Conservation and Transfer
- Describe different types of heat transfer and the effects of temperature variation on materials

Earth Systems, Structures, and Processes
- Recognize weather data collected
- Recognize changes in daily and seasonal weather and have partial understanding of weather patterns.
- Inconsistently make predictions.

Structures and Functions of Living Organisms
- Recognizes some of the required functions for cell survival
- Identifies some differences between single cellular and multi cellular organisms
- Names major human body systems and can name some of their functions

Ecosystems
- Identify the characteristics of common ecosystems
- Identify the roles of organisms in an ecosystem
- Knows that plants and animals are interconnected

Evolution and Genetics
- Identify some characteristics that are inherited
- Give partial explanations of why organisms differ

Level 3
Forces and Motion • Interpret data and use it to explain and predict the changes between forces and its impact on motion. Matter: Properties and Change • Compare and contrast the relationships in matter and energy including the water cycle and draw conclusions based on data. Energy: Conservation and Transfer • Explain different types of heat transfer and recognize the effects of temperature variation on materials using data. Earth Systems, Structures, and Processes • Identify changes in daily and seasonal weather patterns. • Analyze data and make predictions about upcoming events on a local and global level • Explain the influence global patterns have on local weather. Structures and Functions of Living Organisms • Recognize all required functions for cell survival • Identify the differences between single cell and multi cellular, and the purpose of transport systems • Compare and contrast major human body systems Ecosystems • Compare the characteristics of common ecosystems • Classify the roles of an organism in an ecosystem • Understand the interdependence of plants and animals Evolution and Genetics • Identify characteristics in diverse organisms that are inherited and those that are not. • Explain why organisms are similar to or differ from their parents
Level 4
Forces and Motion • Using collected or provided data apply knowledge of force and its impact on motion over time and interpret the effect that changes will have in real world applications. Matter: Properties and Change • Compare and contrast the relationships in matter and energy including the water cycle and draw conclusions based on data using real world applications and investigations. Energy: Conservation and Transfer • Compare and contrast different types of heat transfer and make predictions and draw conclusions about the effects of temperature variation on materials. • Use the data to relate to a practical application Earth Systems, Structures, and Processes • Identify weather trends and make predictions of future events. • Apply the understanding to other geographical areas. Structures and Functions of Living Organisms • Explain how cell functions impact survival • Compare and contrast major human body systems. • Explain the difference between single cell and multi cellular organisms, and the reason for transport systems. • Explain how single cell and multi cellular organism perform necessary functions for life Ecosystems • Use knowledge of ecosystems (characteristics, role of organism and their interconnected relationships) to explain and predict the impact of change within an

ecosystem

Evolution and Genetics

- Differentiate characteristics in diverse organisms that are inherited and those that are not.
- Explain why organisms are similar to or differ from their parents and make predictions about future offspring or conclusions about previous generations

Achievement Level Descriptors: Science 8

Level 1

Matter: Properties and Change
- Recognize a change in matter has occurred.

Energy Conservation and Transfer
- Recognize the various renewable and nonrenewable energy resources and conservation methods.

Earth Systems, Structures, and Processes
- Recognize the structure of the hydrosphere and human impact on the hydrosphere.

Earth History
- Recognize the changes in earth's surface and fossils.

Structure and Function of Living Organisms
- Identifies disease causing agents, and how they are spread, treated, and prevented.

Ecosystems
- Identifies linear relationships within an ecosystem.

Evolution and Genetics
- Identify examples of visible biological or geological change over time.

Molecular Biology
- Recognize that all living organisms need food to survive.

Level 2

Matter: Properties and Change
- Identify the difference between a pure substance and a mixture, and chemical and physical change.

Energy Conservation and Transfer
- Compare renewable and nonrenewable energy, and conservation methods.

Earth Systems, Structures, and Processes
- Compares indicators of water quality and how they are impacted by human activities.

Earth History
- Compare rock formations, fossil records, and land forms that show evidence of change.

Structure and Function of Living Organisms
- Compares disease causing agents and how they are spread, treated, and prevented, classify an outbreak as epidemic or pandemic , and identify examples of biotechnology.

Ecosystems
- Recognizes different types of relationships exist within an ecosystem.

Evolution and Genetics
- Recognizes evidence of biological and geological evolution.

Molecular Biology
- Recognize that various substances serve as a source of energy and building material for living organisms.

Level 3

Matter: Properties and Change
- Explain chemical and physical changes based on properties of matter and law of conservation of matter.

Energy Conservation and Transfer
- Explain the benefits and consequences of various energy resources, the implications of the depletion of renewable resources, and various conservation methods.

Earth Systems, Structures, and Processes
- Infer and predict patterns of human impact on water quality standards.

Earth History
- Explain changes in rock formation, fossil records and landforms over time to understand Earth's history.

Structure and Function of Living Organisms
- Explain how viruses, bacteria, fungi, and parasites are spread, treated, and prevented, explain the difference between epidemic and pandemic, and explain various applications of biotechnology.

Ecosystems
- Explain how change in one aspect of an environment directly affects a different component of ecosystems.

Evolution and Genetics
- Interpret evidence of biological and geological evolution.

Molecular Biology
- Explain and compare the relationship of various substances and activities to the survival of an organism.

Level 4

Matter: Properties and Change
- Predicts chemical and physical changes based on properties and placement of elements on the periodic table.

Energy Conservation and Transfer
- Evaluate the benefits and consequences of various energy resources, the implications of the depletion of renewable and nonrenewable resources, and various conservation methods.

Earth Systems, Structures, and Processes
- Synthesize knowledge, analyzing human impact in creating better quality standards.

Earth History
- Synthesize knowledge of rocks, fossils, core samples and faults to understand Earth's history.

Structure and Function of Living Organisms
- Compare and contrast how viruses, bacteria, fungi, and parasites are spread and prevented and evaluate the various applications of biotechnology.

Ecosystems
- Predicts how change in one aspect of an environment directly and indirectly affects all the other components of the ecosystem.

Evolution and Genetics
- Uses evidence to make and justify inferences and predictions of biological and geological evolution.

Molecular Biology
- Infer how various substances are a source of energy and building materials, and their relationship to the health and survival of an organism.

Achievement Level Descriptors: Biology

Level 1

Structure and Function of Living Organisms

- Students performing at this level have a limited command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: identifying some of the basic structures and functions of prokaryotic and eukaryotic cells; recognizing some specialized cell types, and that cells grow, reproduce and adapt.

Ecosystems

- Students performing at this level have a limited command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: identifying cycles and components for water, carbon, and oxygen cycles; identifying adaptations and recognize it contributes to survival; recognizing that organisms interact and how each organism is affected; recognizing that limiting factors affect population growth; recognizing human activity impacts the environment; recognizing the need for protection and conservation.

Evolution and Genetics

- Students performing at this level have a limited command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: understanding the structure of DNA and being able to define a mutation, visually sequencing the steps of meiosis, constructing punnett squares, defining vocabulary of genetics, being able to read a gel electrophoresis and define application of DNA, define types of evidence for evolution and define natural selection, and use a dichotomous key.

Molecular Biology

- Students performing at this level have a limited command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: identifying the structure and function of major biological molecules, and recognizing that organisms acquire and utilize energy.

Level 2

Structure and Function of Living Organisms

- Students performing at this level have a partial command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: identifying the basic structures and functions of prokaryotic and eukaryotic cell; recognizing specialized cell types; ordering the stages of growth and reproduction; and recognizing adaptations occur.

Ecosystems

- Students performing at this level have a partial command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: identifying components of cycles and why they are important; identifying adaptations and explaining survival advantage; explaining how limiting factors affect populations; identifying examples of protection and conservation.

Evolution and Genetics

- Students performing at this level have a partial command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: understanding the structure and complementary nature of DNA, identify mutations, understand the reduction of chromosome number in meiosis, construct punnett squares for dominant and recessive patterns, identify gender on a karyotype, interpret pedigrees, sequence the steps of genetic engineering and DNA technologies; identify examples of evidences of evolution and natural selection, and read phylogenetic trees.

Appendix D

Molecular Biology

- Students performing at this level have a partial command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: explaining the structure and function of major biological molecules, and describing how organisms acquire and utilize energy.

Level 3

Structure and Function of Living Organisms

- Students performing at this level have a solid command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: differentiating between structure and function of prokaryotic and eukaryotic cells, distinguishing between specialized cell types, and analyze cell growth, reproduction, and environmental adaptation as mechanism to maintain homeostasis and survival.

Ecosystems

- Students performing at this level have a solid command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: analyzing the flow of energy and cycling of mater, analyzing the survival success of organisms and its relationship to adaptations, identifying and explaining specific organisms interactions, explaining populations based on carrying capacity, limiting factors, and population growth, analyzing the effect of human activity on the environment, identifying and explaining the importance of protection and conservation of the environment.

Evolution and Genetics

- Students performing at this level have a solid command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: Explain the process of DNA to protein, identify causes of mutations, interpret specific inheritance patterns, identify chromosomal abnormalities on a karyotype, define unknown individuals on pedigrees, compare DNA fragment size based on gel results, explain the process of genetic engineering and DNA technologies using vocabulary; relate evidence of evolution to early Earth conditions, explain how natural selection leads to change in species, and explain tree diagrams.

Molecular Biology

- Students performing at this level have a solid command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: differentiating between structure and functions of the major biological molecules common to all organisms and analyze energy production and use.

Level 4

Structure and Function of Living Organisms

- Students performing at this level have a superior command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: evaluating the relationships between structure and function of the cell components; describing the role of the DNA in cell specialization, and predicting how changes in the environment can alter cell growth, reproduction, and adaptation.

Ecosystems

- Students performing at this level have a superior command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: relating significance of cycles in ecosystems; analyzing survival and reproductive success and its relationship to behavioral, structural and reproductive adaptation; identifying and explaining all organismal relationships and how they predict the stability of the environment; predicting how changes in limiting factors can affect the stability of the ecosystem; predicting future impact of protection and conservation of natural resources.

Evolution and Genetics

- Students performing at this level have a superior command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by relate process of DNA to protein to cell function. Predict the effect of mutations, predict the impact of meiosis in production in genotypes and phenotypes. Predict the impact of crosses, pedigrees, karyotypes and the environment on offspring. Apply genetic engineering to create a product. Analyze the importance of DNA technologies, and relate evidence to the theories of evolution. Analyze how natural selection can lead to changes in the genetic code, explain the global impact of natural selection, interpret relationships based on classification systems.

Molecular Biology

- Students performing at this level have a superior command of the knowledge and skills contained in the North Carolina Essential Standards (ES) assessed by: analyzing the relationship between the major biological molecules and predict their metabolism and survival.

Appendix D

Achievement Level Descriptors: English II

Level 1
Reading for Literature • Summarize the text using limited evidence and identify characters in a text. • Demonstrate limited knowledge of points of view; determine meanings of limited words or phrases in a text. Reading for Information • Identify the topic of the text. • Identify basic details contained in the text. Writing and Language • Produce writing in response to the prompt. • Develop composition(s) that use evidence or details.
Level 2
Reading for Literature • Use textual evidence to determine theme and summarize central idea and character development in literature. • Identify points of view and determine meanings of most words and phrases in a text. • Identify ideas and references from multiple sources. Reading for Information • Identify the central idea of a text. • Identify an author's point of view or purpose. • Use context clues inconsistently to identify word meanings. Writing and Language • Produce writing (argument, expository, & narrative) in which the development, organization, and/or style are somewhat appropriate to task, purpose, and audience. • Develop composition(s) that uses reasoning, relevance, and/or evidence or details inconsistently. • Form ideas, situations, or information to draw connections and/or distinctions. • Demonstrate knowledge of standard English conventions: grammar, usage, capitalization, punctuation, and/or spelling
Level 3
Reading for Literature • Utilize appropriate textual evidence to determine thematic development and construct objective summaries by analyzing character and plot development in literature. • Analyze the impact of points of view and the author's word, phrase and text structure choices. • Identify the integration of knowledge and ideas from multiple sources. Reading for Information • Determine the development of central idea(s) citing specific evidence. • Analyze an author's point of view or purpose and use of rhetoric. • Analyze an author's argument and choice of support. • Determine the meanings and analyze the impacts of words and phrases as they are used in a text. Writing and Language • Produce clear and coherent writing (argument, expository, & narrative) in which the development, organization, and style are appropriate to task, purpose, and audience. • Articulate and develop composition(s) that use reasoning, relevance, and sufficient evidence or details. • Organize ideas, concepts, situations, problems, or information to sequence

connections and distinctions.
- Demonstrate command of standard English conventions: grammar, usage, capitalization, punctuation, and spelling.
- Employ effective diction and syntax appropriate to the writing task.

Level 4

Reading for Literature
- Analyze strong and thorough textual evidence to determine thematic development and construct objective summaries by analyzing character and plot development in literature through complex inferences.
- Evaluate the impact of points of view and the author's word, phrase and text structure choices.
- Analyze the integration of knowledge and ideas from multiple sources.

Reading for Information
- Analyze the development of central idea(s) citing specific evidence.
- Analyze and evaluate an author's point of view and purpose and use of rhetoric.
- Evaluate the author's reasoning assessing specific valid/invalid claims.
- Determine the meanings and evaluate the impacts of words and phrases as they are used in a text.

Writing and Language
- Produce and critique clear and coherent writing (argument, expository, & narrative) in which the development, organization, and style are appropriate to task, purpose, and audience.
- Articulate and develop composition(s) that use complex reasoning, relevance, and substantial evidence and details.
- Synthesize ideas, concepts, situations, problems, or information to infer connections and distinctions.
- Demonstrate purposeful use of standard English conventions, including grammar, usage, capitalization, punctuation, and spelling.
- Employ purposeful diction and syntax appropriate to the writing task.

Appendix D

Achievement Level Descriptors: Mathematics I

Level 1
Number and Quantity • Identify rational exponents and recall their properties. • Solve multi-step problems given appropriate units, quantities, and scale. Algebra • Limited ability to rewrite expressions and recognize equivalent forms to solve problems. • Add, subtract or multiply polynomials. • Limited ability to solve equations and inequalities. Geometry • Inconsistently apply definitions and geometric theorems. • Inconsistently recognize concepts algebraically in the coordinate plane. • Need remediation to be successful. Statistics and Probability • Ineffectively summarize, represent, and interpret data for both one and two variables. • Ineffectively interpreting and computing linear models with and without technology. Functions • Recall the definition of a function. • Recognize key features of linear, exponential, and quadratic functions. • Identify functions when given multiple representations. • Determine the appropriate function when given context.
Level 2
Number and Quantity • Recognize a pattern. Describe relationships of rational exponents and their properties. • Choose appropriate units, quantities, and scale to solve multi-step problems Algebra • Inconsistently rewrite expressions and recognize equivalent forms to solve problems. • Inconsistently apply and solve appropriated operations on polynomials. • Inconsistently create equations that describe numbers or relationships. • Understand the process of solving equations and inequalities. Geometry • Inconsistently apply definitions and geometric theorems. • Recognize concepts algebraically in the coordinate plane. • May need remediation to be successful. Statistics and Probability • Inconsistently summarize, represent, and interpret data for both one and two variables. • Inconsistently interpreting and computing linear models with and without technology. Functions • Make observations and use key features of linear, exponential, and quadratic functions. • Compare functions when given multiple representations. • Classify different functions. • Organize information in a given context to model a specific function.
Level 3
Number and Quantity • Draw conclusions from a pattern, justify relationships of rational exponents and their

properties.
- Interpret and justify appropriate units, quantities, scale to solve multi-step problems.

Algebra
- Rewrite expressions and recognize equivalent forms to solve problems.
- Apply and solve appropriated operations on polynomials.
- Create equations that describe numbers or relationships.
- Understand and explain the process of solving equations and inequalities.

Geometry
- Consistently apply precise definitions and formulas to prove geometric theorems and concepts algebraically in the coordinate plane.

Statistics and Probability
- Consistently and effectively summarize, represent, and interpret data for both one and two variables.
- Consistently and effectively interpreting and computing linear models with and without technology.

Functions
- Make mathematical connections regarding linear, exponential, and quadratic functions.
- Compare and interpret multiple representations and key features of each function.
- Use appropriate tools to model transformations and parameters of each function.
- Create functions to model problems in context.

Level 4

Number and Quantity
- Draw conclusions from a pattern, justify and extend relationships of rational exponents and their properties.
- Develop and prove appropriate units, quantities, scale to solve multi-step problems.

Algebra
- Develop expressions and equivalent forms to solve problems.
- Develop polynomials, equations, and inequalities in context and solve using appropriate operations.
- Develop and make corrections for the process of solving equations and inequalities.

Geometry
- Consistently apply and implement precise definitions and formulas to prove geometric theorems and concepts algebraically in the coordinate plane.

Statistics and Probability
- Precisely summarize, represent, and interpret data for both one and two variables.
- Precisely interpreting and computing linear models with and without technology.

Functions
- Use complex reasoning to interpret, explain, and apply key features of linear, exponential, and quadratic functions.
- Choose a variety of strategies to model functions within context.
- Create contextual problems to fit a function.

Appendix E: Panelist Demographic Survey

Committee:_____ Panelist ID: _____

Please provide the following demographic information that will be used to describe the general characteristics of the panelists who are recommending standards for the North Carolina EOC/EOG tests.

Course(s) and/or Grade Level(s) Taught During the 2012-13 School Year:

Course(s) and/or Grade Level(s)/Content Area(s) Taught before the 2012-13 School Year/Other Education Experience:

Years of Educational Experience: _____

Gender (circle one): Male Female

Ethnicity:
_____ American Indian or Alaska Native _____ Asian _____ Black _____ Hispanic/Latino
_____ White _____ Native Hawaiian or Other Pacific Islander _____ Two or more races

If applicable, please indicate the approximate percentage of students you teach by gender.
_____ Male _____ Female ____ N/A

If applicable, please indicate the approximate percentage of students you teach by ethnicity.
_____ American Indian or Alaska Native _____ Asian _____ Black _____ Hispanic/Latino
_____ White _____ Native Hawaiian or Other Pacific Islander _____ Two or more races _____ N/A

If applicable, please indicate the approximate percentage of students you teach who are considered economically disadvantaged.
_____ % _____ N/A

If applicable, please indicate the approximate percentage of students you teach who have an English Language Learning accommodation.
_____ % _____ N/A

Appendix E

If applicable, please indicate the approximate percentage of students you teach who have an Individual Education Plan accommodation.
_____ % _____ N/A
Compared to other school districts in North Carolina, which of the following best describes the size of your district? (Circle one.)

Large Medium Small

Compared to other school districts in North Carolina, which of the following best describes the community setting of your district? (Circle one.)

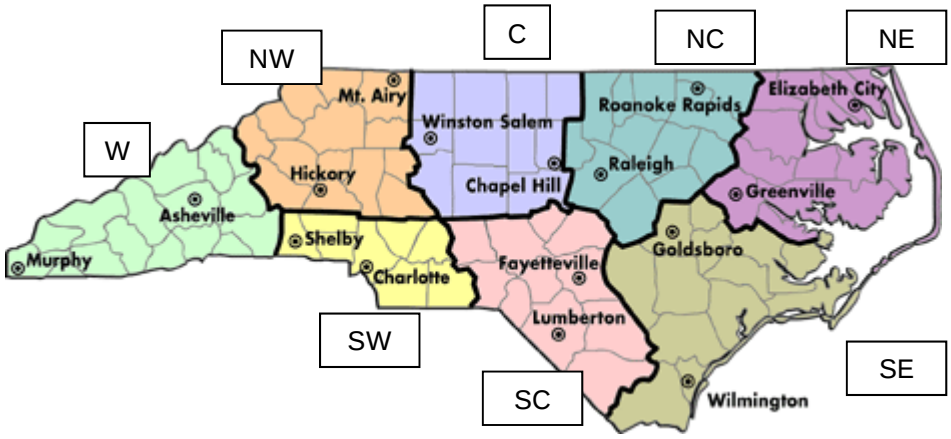
Urban Suburban Rural

Compared to other school districts in North Carolina, which of the following best describes the geographic location of your district within the state? (Circle one.)

Northwestern North Central Northeastern

Western Central

Southwestern South Central Southeastern



Appendix F: Standard Setting Readiness Survey

Panelist Readiness Survey: Round One

Subject: _____ Grade: _____ Panelist ID: _____

Please circle your responses to the following statements.

Readiness for Round One of Standard Setting		
I understand my task for Round One.	**No**	**Yes**
I am ready to begin Round One.	**No**	**Yes**

Appendix F

Panelist Readiness Survey: Round Two

Subject: _____ Grade: _____ Panelist ID: _____

Please circle your responses to the following statements.

Readiness for Round Two of Standard Setting		
I understand my task for Round Two.	**No**	**Yes**
I understand the feedback data that were presented following Round One.	**No**	**Yes**
I am ready to begin Round Two.	**No**	**Yes**

Panelist Readiness Survey: Round Three

Subject: _____ Grade: _____ Panelist ID: _____

Please circle your responses to the following statements.

Readiness for Round Three of Standard Setting		
I understand my task for Round Three.	**No**	**Yes**
I understand the feedback data that were presented following Round Two.	**No**	**Yes**
I am ready to begin Round Three.	**No**	**Yes**

Appendix G: Standard Setting Recording Form

Subject: _____ Grade: _____ Panelist ID: _____

Instructions:
Record the page number where you placed each of your bookmarks corresponding to the item that elicited the last "yes" response for each round in the appropriate boxes below.

Achievement Level	Page Number		
	Round 1	Round 2	Round 3
Level 2			
Level 3			
Level 4			

Appendix H: Standard Setting Evaluation Survey

Subject: _____ Grade: _____

The purpose of this evaluation is to gather your feedback about the standard setting process. Your feedback will provide a basis for evaluating the training, methods, and materials in the standard setting process.

Please respond to the following questions.

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.

		Strongly Disagree	Disagree	Agree	Strongly Agree
a.	I understood the purpose of this standard setting workshop.	☐	☐	☐	☐
b.	The training materials contained all the information I needed to complete my assignment.	☐	☐	☐	☐
c.	The training on the item mapping process gave me the information I needed to complete my assignment.	☐	☐	☐	☐
d.	The training on the content standards gave me the information I needed to complete my assignment.	☐	☐	☐	☐
e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	☐	☐	☐	☐
f.	The feedback on cut scores gave me the information I needed to complete my assignment.	☐	☐	☐	☐
g.	The feedback on impact data gave me the information I needed to complete my assignment.	☐	☐	☐	☐
h.	I could clearly distinguish between achievement levels.	☐	☐	☐	☐
i	The descriptions of achievement levels were clear to me.	☐	☐	☐	☐

2. Please rate the clarity of the following materials used in the standard setting process.

		Very Unclear	Somewhat Unclear	Somewhat Clear	Very Clear
a.	Instructions provided in the training materials	☐	☐	☐	☐
b.	Instructions provided by the facilitators	☐	☐	☐	☐
c.	Description of achievement level descriptors	☐	☐	☐	☐

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.

		Not at all useful	Somewhat useful	Very useful
a.	Taking the assessment prior to standard setting	☐	☐	☐
b.	Practicing the item mapping process	☐	☐	☐
c.	Training materials	☐	☐	☐
d.	Table discussions	☐	☐	☐
e.	Large group discussions	☐	☐	☐

4. How important was each of the following factors in placing your bookmark?

		Not important	Somewhat important	Very important
a.	The description of achievement level descriptors	☐	☐	☐
b.	Your perception of the difficulty of the items	☐	☐	☐
c.	Your experiences with students	☐	☐	☐
d.	Table discussions	☐	☐	☐
e.	Large group discussions	☐	☐	☐
f.	Agreement feedback data	☐	☐	☐
g.	Impact data	☐	☐	☐

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?

		Too much	Too little	About Right
a.	Taking the assessment	☐	☐	☐
b.	Scoring the assessment	☐	☐	☐
c.	Training on the item mapping process	☐	☐	☐
d.	Table discussions on feedback	☐	☐	☐
e.	Group discussions on feedback	☐	☐	☐

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Do the page number cuts align to the ALDs?	☐	☐	☐	☐

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Were you able to provide independent judgments?	☐	☐	☐	☐

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Were you able to provide input to discussion?	☐	☐	☐	☐

10. Please rate how comfortable you are with the final cut scores.

	Very Uncomfortable	Somewhat Uncomfortable	Somewhat Comfortable	Very Comfortable
a. How comfortable are you with the final cut scores?	☐	☐	☐	☐

If you responded “Very Uncomfortable” or “Somewhat Uncomfortable” to question 10, proceed to question 11. If you responded “Somewhat Comfortable” or “Very Comfortable” to question 10, proceed to question 14.

11. If you were not comfortable with the Level 2 cut score, would you move it(indicate with a check):

    Comfortable:_____
    To a lower page number: _____
    To a higher page number: _____

    If you checked “lower” or “higher,” by how many page numbers would you move in that direction?

    Not applicable: _____
    Number of pages:_____

12. If you were not comfortable with the Level 3 cut score, would you move it(indicate with a check):

    Comfortable:_____
    To a lower page number: _____
    To a higher page number: _____

    If you checked “lower” or “higher,” by how many page numbers would you move in that direction?

    Not applicable: _____
    Number of pages:_____

13. If you were not comfortable with the Level 4 cut score, would you move it(indicate with a check):

    Comfortable:_____
    To a lower page number: _____
    To a higher page number: _____

    If you checked “lower” or “higher,” by how many page numbers would you move in that direction?

    Not applicable: _____
    Number of pages:_____

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)

Appendix I: Panelist Cut Scores Across Rounds

Mathematics 3: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1E	1	2	13	14	17
A1E	1	3	39	37	42
A1E	1	4	70	70	70
A2E	1	2	12	11	14
A2E	1	3	39	32	34
A2E	1	4	75	66	67
A3E	1	2	11	15	15
A3E	1	3	22	28	31
A3E	1	4	59	66	68
A4E	1	2	8	14	16
A4E	1	3	22	27	48
A4E	1	4	60	67	68
A5E	1	2	8	14	14
A5E	1	3	28	39	37
A5E	1	4	69	73	73
A6E	1	2	24	17	17
A6E	1	3	58	44	44
A6E	1	4	73	64	70
B10E	2	2	10	17	17
B10E	2	3	21	28	42
B10E	2	4	59	69	69
B11E	2	2	18	17	17
B11E	2	3	33	33	47
B11E	2	4	63	79	79
B12E	2	2	10	18	17
B12E	2	3	30	42	42
B12E	2	4	55	63	69
B19E	2	2	14	13	17
B19E	2	3	22	28	42
B19E	2	4	63	65	71
B7E	2	2	22	17	17
B7E	2	3	48	40	42
B7E	2	4	67	67	69
B8E	2	2	18	17	17
B8E	2	3	44	43	42
B8E	2	4	73	72	72
B9E	2	2	14	17	17
B9E	2	3	51	48	44
B9E	2	4	71	71	69
C13E	3	2	16	12	12
C13E	3	3	44	44	30
C13E	3	4	81	66	58
C14E	3	2	18	13	13
C14E	3	3	65	28	29
C14E	3	4	87	56	56
C15E	3	2	16	16	16

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
C15E	3	3	29	29	38
C15E	3	4	59	59	58
C16E	3	2	16	16	16
C16E	3	3	34	40	40
C16E	3	4	48	68	58
C17E	3	2	16	9	10
C17E	3	3	48	23	30
C17E	3	4	75	75	70
C18E	3	2	10	14	10
C18E	3	3	21	21	28
C18E	3	4	60	65	58
C20E	3	2	10	14	10
C20E	3	3	42	35	28
C20E	3	4	63	63	58

Mathematics 4: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	14	20	18
A1	1	3	29	48	34
A1	1	4	71	71	71
A2	1	2	13	20	20
A2	1	3	30	30	33
A2	1	4	71	71	71
A3	1	2	20	20	11
A3	1	3	34	34	34
A3	1	4	71	71	71
A4	1	2	33	20	20
A4	1	3	69	33	37
A4	1	4	78	69	70
A5	1	2	20	17	13
A5	1	3	43	33	33
A5	1	4	71	71	71
A6	1	2	19	19	19
A6	1	3	37	32	34
A6	1	4	69	70	70
B10	2	2	27	27	23
B10	2	3	70	51	47
B10	2	4	80	73	73
B11	2	2	20	20	14
B11	2	3	47	48	48
B11	2	4	72	72	72
B12	2	2	20	25	20
B12	2	3	52	47	47
B12	2	4	70	70	70
B19	2	2	28	25	8
B19	2	3	49	48	48
B19	2	4	70	70	70
B7	2	2	21	23	9
B7	2	3	52	49	47
B7	2	4	76	71	70

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
B8	2	2	20	25	19
B8	2	3	47	51	47
B8	2	4	67	72	72
B9	2	2	16	25	19
B9	2	3	47	47	47
B9	2	4	63	70	70
C13	3	2	7	8	8
C13	3	3	20	21	20
C13	3	4	66	58	58
C14	3	2	12	9	9
C14	3	3	21	21	21
C14	3	4	55	56	54
C15	3	2	15	23	23
C15	3	3	36	36	36
C15	3	4	61	61	61
C16	3	2	13	13	15
C16	3	3	33	33	33
C16	3	4	66	66	70
C17	3	2	10	9	12
C17	3	3	34	25	25
C17	3	4	63	64	64
C18	3	2	5	7	7
C18	3	3	19	30	30
C18	3	4	53	58	58
C20	3	2	7	12	12
C20	3	3	19	23	22
C20	3	4	69	69	69

Mathematics 5: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	12	15	9
A1	1	3	39	33	33
A1	1	4	61	61	61
A2	1	2	18	14	8
A2	1	3	33	33	33
A2	1	4	76	71	67
A3	1	2	20	12	14
A3	1	3	33	33	33
A3	1	4	65	65	65
A4	1	2	7	14	14
A4	1	3	24	24	24
A4	1	4	54	76	68
A5	1	2	15	12	12
A5	1	3	34	34	34
A5	1	4	68	66	66
A6	1	2	16	19	19
A6	1	3	42	42	42
A6	1	4	65	67	67
B10	2	2	19	16	12
B10	2	3	45	38	40

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
B10	2	4	64	64	70
B11	2	2	16	9	9
B11	2	3	44	39	39
B11	2	4	77	65	65
B12	2	2	14	11	9
B12	2	3	33	33	33
B12	2	4	58	66	66
B19	2	2	23	14	9
B19	2	3	44	39	39
B19	2	4	70	66	66
B7	2	2	9	6	6
B7	2	3	24	28	32
B7	2	4	73	66	66
B8	2	2	9	9	9
B8	2	3	36	39	39
B8	2	4	65	65	65
B9	2	2	12	9	9
B9	2	3	32	32	32
B9	2	4	65	65	60
C13	3	2	9	9	9
C13	3	3	33	34	19
C13	3	4	44	48	44
C14	3	2	12	12	9
C14	3	3	35	35	35
C14	3	4	59	59	59
C15	3	2	19	19	16
C15	3	3	32	32	32
C15	3	4	56	56	56
C16	3	2	12	15	14
C16	3	3	29	30	30
C16	3	4	65	65	64
C17	3	2	12	12	6
C17	3	3	31	33	25
C17	3	4	62	61	61
C18	3	2	6	7	5
C18	3	3	27	27	25
C18	3	4	61	61	61
C20	3	2	19	9	5
C20	3	3	42	32	19
C20	3	4	70	65	61

Mathematics 6: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	15	23	6
A1	1	3	37	47	20
A1	1	4	47	66	45
A4	1	2	17	19	5
A4	1	3	35	36	17
A4	1	4	65	62	32
A5	1	2	21	19	4

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A5	1	3	35	36	17
A5	1	4	47	65	32
A6	1	2	4	18	10
A6	1	3	32	37	34
A6	1	4	44	48	49
B10	2	2	11	23	12
B10	2	3	22	42	41
B10	2	4	46	70	76
B11	2	2	18	18	10
B11	2	3	39	35	30
B11	2	4	80	75	50
B12	2	2	16	23	15
B12	2	3	38	42	31
B12	2	4	74	78	50
B7	2	2	5	23	10
B7	2	3	32	36	36
B7	2	4	69	69	69
B8	2	2	10	24	24
B8	2	3	42	47	35
B8	2	4	69	69	69
B9	2	2	22	22	22
B9	2	3	47	47	47
B9	2	4	75	75	75
C13	3	2	10	10	10
C13	3	3	36	33	31
C13	3	4	76	81	72
C14	3	2	18	16	10
C14	3	3	59	36	36
C14	3	4	92	75	59
C15	3	2	9	14	9
C15	3	3	36	36	29
C15	3	4	75	75	69
C16	3	2	3	10	5
C16	3	3	36	36	36
C16	3	4	79	79	76
C17	3	2	10	15	10
C17	3	3	32	36	32
C17	3	4	65	76	68
C18	3	2	23	11	10
C18	3	3	44	27	23
C18	3	4	68	66	65

Mathematics 7: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	6	9	9
A1	1	3	27	28	35
A1	1	4	51	50	60
A4	1	2	12	9	9
A4	1	3	24	28	28
A4	1	4	51	50	55

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A5	1	2	12	9	9
A5	1	3	28	28	36
A5	1	4	58	50	58
A6	1	2	12	9	12
A6	1	3	23	28	28
A6	1	4	50	50	50
B10	2	2	13	13	10
B10	2	3	37	46	42
B10	2	4	73	77	77
B11	2	2	20	16	8
B11	2	3	42	34	25
B11	2	4	51	57	50
B12	2	2	17	17	10
B12	2	3	43	43	30
B12	2	4	77	50	50
B7	2	2	9	9	9
B7	2	3	25	28	30
B7	2	4	72	66	72
B8	2	2	16	11	11
B8	2	3	30	30	30
B8	2	4	45	55	65
B9	2	2	23	23	23
B9	2	3	51	51	51
B9	2	4	67	69	78
C13	3	2	10	14	9
C13	3	3	15	22	27
C13	3	4	60	59	59
C14	3	2	9	9	7
C14	3	3	28	28	28
C14	3	4	55	50	55
C15	3	2	9	9	6
C15	3	3	28	28	21
C15	3	4	63	59	59
C16	3	2	6	6	4
C16	3	3	32	28	24
C16	3	4	50	50	55
C17	3	2	7	6	6
C17	3	3	28	17	18
C17	3	4	75	60	71
C18	3	2	10	10	8
C18	3	3	24	26	21
C18	3	4	51	48	56

Mathematics 8: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	6	6	6
A1	1	3	27	39	39
A1	1	4	49	59	70
A4	1	2	3	4	4
A4	1	3	15	36	39

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A4	1	4	48	64	70
A5	1	2	6	10	6
A5	1	3	25	39	39
A5	1	4	64	64	70
A6	1	2	15	10	15
A6	1	3	40	40	40
A6	1	4	51	51	54
B10	2	2	10	14	10
B10	2	3	30	32	30
B10	2	4	68	72	72
B11	2	2	22	13	13
B11	2	3	40	55	46
B11	2	4	72	85	70
B12	2	2	29	12	12
B12	2	3	46	55	50
B12	2	4	55	85	70
B7	2	2	17	14	10
B7	2	3	32	32	30
B7	2	4	60	71	71
B8	2	2	10	10	15
B8	2	3	25	26	26
B8	2	4	68	68	68
B9	2	2	26	26	26
B9	2	3	51	45	45
B9	2	4	68	68	68
C13	3	2	10	10	9
C13	3	3	18	24	28
C13	3	4	40	47	60
C14	3	2	6	6	6
C14	3	3	34	34	22
C14	3	4	54	60	70
C15	3	2	11	11	10
C15	3	3	32	28	22
C15	3	4	53	64	64
C16	3	2	4	5	4
C16	3	3	26	27	22
C16	3	4	60	71	71
C17	3	2	18	15	9
C17	3	3	32	32	22
C17	3	4	71	71	76
C18	3	2	13	11	9
C18	3	3	27	27	22
C18	3	4	72	72	74

Reading 3: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1E	1	2	10	19	22
A1E	1	3	35	52	54
A1E	1	4	61	68	68
A2E	1	2	5	7	21

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A2E	1	3	36	39	45
A2E	1	4	68	73	73
A3E	1	2	28	9	28
A3E	1	3	43	29	43
A3E	1	4	69	67	68
A4E	1	2	13	9	11
A4E	1	3	25	55	55
A4E	1	4	54	74	74
A5E	1	2	7	13	27
A5E	1	3	35	52	66
A5E	1	4	74	74	74
A6E	1	2	39	45	45
A6E	1	3	71	76	76
A6E	1	4	76	80	82
B10E	2	2	10	20	35
B10E	2	3	28	45	66
B10E	2	4	60	65	79
B11E	2	2	32	14	30
B11E	2	3	62	30	55
B11E	2	4	73	55	71
B12E	2	2	15	20	28
B12E	2	3	39	41	62
B12E	2	4	71	71	80
B7E	2	2	36	7	22
B7E	2	3	70	35	70
B7E	2	4	76	70	76
B8E	2	2	14	14	18
B8E	2	3	32	35	45
B8E	2	4	60	67	78
B9E	2	2	14	13	31
B9E	2	3	30	41	65
B9E	2	4	56	67	79
C13E	3	2	32	22	22
C13E	3	3	62	41	45
C13E	3	4	74	62	65
C14E	3	2	20	25	26
C14E	3	3	52	61	63
C14E	3	4	65	82	82
C15E	3	2	36	22	36
C15E	3	3	60	42	53
C15E	3	4	71	55	70
C16E	3	2	19	21	22
C16E	3	3	36	41	41
C16E	3	4	61	65	71
C17E	3	2	5	21	15
C17E	3	3	23	51	40
C17E	3	4	61	71	60
C18E	3	2	7	19	25
C18E	3	3	41	45	60
C18E	3	4	70	70	76

Reading 4: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	18	31	35
A1	1	3	65	65	75
A1	1	4	76	78	78
A2	1	2	29	29	35
A2	1	3	58	59	63
A2	1	4	75	75	78
A3	1	2	36	31	34
A3	1	3	53	53	53
A3	1	4	76	76	76
A4	1	2	28	28	28
A4	1	3	62	58	64
A4	1	4	79	79	82
A5	1	2	20	24	24
A5	1	3	67	67	67
A5	1	4	82	82	82
A6	1	2	41	41	41
A6	1	3	78	78	78
A6	1	4	82	82	82
B10	2	2	31	28	24
B10	2	3	65	57	57
B10	2	4	75	75	75
B11	2	2	24	35	28
B11	2	3	42	64	61
B11	2	4	64	80	77
B12	2	2	20	25	25
B12	2	3	53	59	64
B12	2	4	75	78	78
B7	2	2	33	28	31
B7	2	3	76	67	58
B7	2	4	82	75	75
B8	2	2	23	24	24
B8	2	3	55	60	60
B8	2	4	72	75	75
B9	2	2	24	24	24
B9	2	3	55	55	55
B9	2	4	73	75	75
C13	3	2	34	29	24
C13	3	3	68	64	54
C13	3	4	80	76	70
C14	3	2	32	32	22
C14	3	3	52	55	53
C14	3	4	68	76	76
C15	3	2	26	34	33
C15	3	3	47	53	53
C15	3	4	76	76	76
C16	3	2	24	28	25
C16	3	3	44	47	55
C16	3	4	66	68	70

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
C17	3	2	10	24	25
C17	3	3	37	50	51
C17	3	4	63	68	68
C18	3	2	28	29	24
C18	3	3	63	63	56
C18	3	4	76	76	75

Reading 5: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	41	35	28
A1	1	3	72	66	58
A1	1	4	82	77	72
A2	1	2	30	33	28
A2	1	3	63	65	60
A2	1	4	80	80	77
A3	1	2	23	23	23
A3	1	3	55	58	58
A3	1	4	75	75	75
A4	1	2	22	24	24
A4	1	3	62	62	62
A4	1	4	78	79	79
A5	1	2	43	28	28
A5	1	3	70	70	70
A5	1	4	82	82	82
A6	1	2	37	37	37
A6	1	3	73	73	73
A6	1	4	82	82	82
B10	2	2	25	22	23
B10	2	3	60	55	55
B10	2	4	72	67	72
B11	2	2	25	25	25
B11	2	3	63	60	55
B11	2	4	82	79	66
B12	2	2	35	24	24
B12	2	3	68	56	56
B12	2	4	81	73	73
B7	2	2	23	23	23
B7	2	3	50	54	54
B7	2	4	66	72	68
B8	2	2	22	22	22
B8	2	3	50	53	55
B8	2	4	70	70	70
B9	2	2	22	22	22
B9	2	3	49	53	49
B9	2	4	72	69	69
C13	3	2	22	21	21
C13	3	3	53	51	47
C13	3	4	68	61	62
C14	3	2	14	20	18
C14	3	3	42	47	42

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
C14	3	4	60	67	67
C15	3	2	23	23	23
C15	3	3	43	43	43
C15	3	4	68	68	61
C16	3	2	23	22	20
C16	3	3	54	51	45
C16	3	4	73	68	67
C17	3	2	23	17	17
C17	3	3	55	46	41
C17	3	4	66	66	61
C18	3	2	26	24	24
C18	3	3	55	53	53
C18	3	4	72	72	72

Reading 6: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	30	10	24
A1	1	3	66	56	54
A1	1	4	75	78	72
A20	1	2	10	24	22
A20	1	3	39	54	54
A20	1	4	66	72	72
A2	1	2	15	19	25
A2	1	3	43	51	50
A2	1	4	73	67	67
A3	1	2	18	10	10
A3	1	3	57	39	46
A3	1	4	78	70	72
A4	1	2	7	7	7
A4	1	3	34	43	43
A4	1	4	72	72	74
A5	1	2	14	28	25
A5	1	3	28	67	57
A5	1	4	39	86	71
A6	1	2	29	24	24
A6	1	3	58	56	56
A6	1	4	70	72	70
B10	2	2	7	7	7
B10	2	3	34	40	40
B10	2	4	69	69	69
B11	2	2	8	19	24
B11	2	3	22	36	30
B11	2	4	39	60	65
B12	2	2	7	13	7
B12	2	3	39	39	34
B12	2	4	69	69	69
B21	2	2	25	13	7
B21	2	3	65	35	25
B21	2	4	75	58	50
B7	2	2	20	24	22

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
B7	2	3	43	50	52
B7	2	4	57	69	69
B8	2	2	10	7	7
B8	2	3	31	28	36
B8	2	4	57	62	69
C13	3	2	11	22	13
C13	3	3	40	55	47
C13	3	4	65	68	66
C14	3	2	7	11	26
C14	3	3	29	40	58
C14	3	4	57	67	78
C15	3	2	7	26	13
C15	3	3	34	50	46
C15	3	4	66	70	69
C17	3	2	24	13	15
C17	3	3	56	46	46
C17	3	4	80	66	69
C18	3	2	10	13	18
C18	3	3	29	46	46
C18	3	4	72	72	74
C19	3	2	13	7	13
C19	3	3	30	42	47
C19	3	4	57	67	71

Reading 7: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	11	11	11
A1	1	3	62	30	48
A1	1	4	80	70	70
A20	1	2	14	15	16
A20	1	3	31	44	45
A20	1	4	70	70	71
A2	1	2	12	18	11
A2	1	3	58	45	42
A2	1	4	73	56	56
A3	1	2	11	11	11
A3	1	3	49	56	53
A3	1	4	71	74	71
A4	1	2	11	13	16
A4	1	3	45	54	54
A4	1	4	73	74	74
A5	1	2	14	14	14
A5	1	3	32	55	55
A5	1	4	55	70	65
A6	1	2	17	17	17
A6	1	3	39	45	45
A6	1	4	70	71	70
B10	2	2	12	9	9
B10	2	3	43	40	33
B10	2	4	73	70	72

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
B11	2	2	16	14	14
B11	2	3	35	37	39
B11	2	4	74	71	70
B12	2	2	15	11	11
B12	2	3	33	30	30
B12	2	4	73	74	74
B21	2	2	11	11	11
B21	2	3	48	24	30
B21	2	4	70	56	56
B7	2	2	15	15	15
B7	2	3	45	48	36
B7	2	4	66	66	51
B8	2	2	9	12	10
B8	2	3	29	34	30
B8	2	4	61	70	62
C13	3	2	14	19	19
C13	3	3	44	46	45
C13	3	4	62	66	68
C14	3	2	11	15	19
C14	3	3	42	50	48
C14	3	4	66	71	70
C15	3	2	18	18	18
C15	3	3	50	48	48
C15	3	4	71	67	70
C17	3	2	14	14	18
C17	3	3	46	48	48
C17	3	4	61	70	70
C18	3	2	15	12	18
C18	3	3	48	48	48
C18	3	4	72	74	73
C19	3	2	14	17	18
C19	3	3	48	49	49
C19	3	4	71	70	70

Reading 8: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	22	22	16
A1	1	3	43	46	44
A1	1	4	71	72	70
A20	1	2	15	17	16
A20	1	3	49	49	49
A20	1	4	75	73	73
A2	1	2	10	16	11
A2	1	3	45	40	41
A2	1	4	65	66	66
A3	1	2	7	12	13
A3	1	3	51	46	50
A3	1	4	72	72	72
A4	1	2	10	16	16
A4	1	3	37	49	49

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A4	1	4	72	72	72
A5	1	2	25	24	24
A5	1	3	44	44	44
A5	1	4	73	71	71
A6	1	2	16	16	16
A6	1	3	43	44	42
A6	1	4	71	72	71
B10	2	2	10	13	10
B10	2	3	34	30	28
B10	2	4	59	58	58
B11	2	2	30	16	15
B11	2	3	52	32	40
B11	2	4	78	69	69
B12	2	2	10	10	10
B12	2	3	29	29	30
B12	2	4	53	55	55
B21	2	2	20	21	20
B21	2	3	49	35	33
B21	2	4	67	51	54
B7	2	2	26	23	23
B7	2	3	46	46	42
B7	2	4	55	55	62
B8	2	2	12	16	16
B8	2	3	30	35	30
B8	2	4	61	64	57
C13	3	2	16	17	16
C13	3	3	42	33	33
C13	3	4	68	68	67
C14	3	2	23	22	22
C14	3	3	53	49	48
C14	3	4	72	73	71
C15	3	2	17	17	17
C15	3	3	47	41	43
C15	3	4	71	64	68
C17	3	2	15	15	18
C17	3	3	47	34	46
C17	3	4	73	67	72
C18	3	2	11	22	22
C18	3	3	30	32	40
C18	3	4	72	72	72
C19	3	2	22	20	22
C19	3	3	46	48	46
C19	3	4	72	72	72

Science 5: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A13	1	2	7	12	21
A13	1	3	16	43	45
A13	1	4	30	63	70
A2	1	2	9	21	17

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A2	1	3	37	40	45
A2	1	4	59	61	61
A3	1	2	8	16	16
A3	1	3	22	36	37
A3	1	4	78	59	59
A4	1	2	15	15	15
A4	1	3	35	41	40
A4	1	4	68	68	68
A5	1	2	10	21	14
A5	1	3	25	45	36
A5	1	4	55	63	49
A6	1	2	21	15	14
A6	1	3	45	36	36
A6	1	4	63	64	68
B10	2	2	11	11	11
B10	2	3	48	50	45
B10	2	4	83	82	68
B11	2	2	12	12	12
B11	2	3	37	46	46
B11	2	4	77	77	77
B14	2	2	11	9	9
B14	2	3	37	43	45
B14	2	4	67	67	72
B8	2	2	9	11	9
B8	2	3	74	52	45
B8	2	4	84	74	74
B9	2	2	11	11	9
B9	2	3	57	53	52
B9	2	4	67	78	67
C15	3	2	7	12	12
C15	3	3	29	45	45
C15	3	4	72	72	72
C16	3	2	8	8	12
C16	3	3	38	45	45
C16	3	4	64	64	64
C17	3	2	8	8	8
C17	3	3	41	45	42
C17	3	4	78	78	70
C18	3	2	13	9	9
C18	3	3	27	37	37
C18	3	4	67	77	72
C20	3	2	15	12	11
C20	3	3	39	39	38
C20	3	4	68	68	71

Science 8: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	3	4	6
A1	1	3	41	23	22
A1	1	4	57	62	60

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A2	1	2	10	6	7
A2	1	3	27	22	22
A2	1	4	60	75	69
A3	1	2	5	6	7
A3	1	3	15	21	22
A3	1	4	77	86	70
A4	1	2	6	7	7
A4	1	3	18	34	22
A4	1	4	77	84	69
A5	1	2	6	5	7
A5	1	3	16	28	22
A5	1	4	63	74	66
A6	1	2	15	7	6
A6	1	3	51	25	22
A6	1	4	84	78	64
A7	1	2	15	7	7
A7	1	3	51	33	25
A7	1	4	78	60	63
B10	2	2	13	7	7
B10	2	3	33	20	20
B10	2	4	75	69	67
B11	2	2	10	8	7
B11	2	3	34	19	20
B11	2	4	76	64	64
B12	2	2	5	8	5
B12	2	3	17	21	20
B12	2	4	34	61	58
B8	2	2	4	5	5
B8	2	3	15	20	17
B8	2	4	51	51	63
B9	2	2	3	4	5
B9	2	3	10	23	20
B9	2	4	46	55	61
C14	3	2	3	2	2
C14	3	3	13	17	15
C14	3	4	69	69	64
C15	3	2	4	4	4
C15	3	3	13	21	21
C15	3	4	60	69	66
C16	3	2	5	4	2
C16	3	3	16	14	14
C16	3	4	28	37	37
C17	3	2	3	7	7
C17	3	3	16	22	19
C17	3	4	66	64	66
C19	3	2	2	2	2
C19	3	3	19	5	19
C19	3	4	80	65	66

Biology: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	28	21	20
A1	1	3	56	50	48
A1	1	4	80	74	79
A2	1	2	27	25	25
A2	1	3	53	47	47
A2	1	4	81	81	81
A3	1	2	25	27	26
A3	1	3	58	54	50
A3	1	4	80	80	80
A4	1	2	20	23	18
A4	1	3	50	48	47
A4	1	4	80	80	80
A5	1	2	25	24	20
A5	1	3	70	53	53
A5	1	4	81	81	81
A6	1	2	27	17	24
A6	1	3	49	53	47
A6	1	4	81	81	81
A7	1	2	28	27	24
A7	1	3	62	47	47
A7	1	4	81	81	81
B11	2	2	27	20	15
B11	2	3	53	47	28
B11	2	4	81	67	67
B13	2	2	31	20	20
B13	2	3	51	48	37
B13	2	4	80	72	72
B15	2	2	28	20	15
B15	2	3	59	47	28
B15	2	4	79	73	68
B8	2	2	29	22	20
B8	2	3	50	41	41
B8	2	4	74	74	69
B9	2	2	27	20	15
B9	2	3	57	47	27
B9	2	4	82	67	67
C12	3	2	31	27	20
C12	3	3	56	52	47
C12	3	4	70	67	67
C16	3	2	22	27	20
C16	3	3	41	52	47
C16	3	4	73	67	68
C17	3	2	28	28	20
C17	3	3	50	52	47
C17	3	4	68	68	68
C18	3	2	30	28	20
C18	3	3	52	53	47
C18	3	4	76	69	67
C19	3	2	3	27	21

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
C19	3	3	18	38	47
C19	3	4	25	49	67
C20	3	2	27	27	21
C20	3	3	50	51	47
C20	3	4	68	69	67
C21	3	2	28	28	20
C21	3	3	56	52	47
C21	3	4	77	69	67

English II: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	6	9	9
A1	1	3	13	35	35
A1	1	4	47	57	66
A2	1	2	4	13	6
A2	1	3	20	36	36
A2	1	4	48	57	62
A3	1	2	4	9	9
A3	1	3	21	30	35
A3	1	4	36	55	78
A4	1	2	4	4	6
A4	1	3	8	27	27
A4	1	4	94	80	80
A5	1	2	6	6	8
A5	1	3	13	34	34
A5	1	4	27	57	65
A7	1	2	6	6	6
A7	1	3	21	35	35
A7	1	4	55	57	74
B10	2	2	3	16	10
B10	2	3	16	27	30
B10	2	4	58	58	58
B12	2	2	5	12	12
B12	2	3	20	30	35
B12	2	4	46	74	79
B13	2	2	6	6	6
B13	2	3	29	28	28
B13	2	4	82	82	82
B14	2	2	9	8	8
B14	2	3	27	27	26
B14	2	4	80	82	82
B8	2	2	6	6	6
B8	2	3	27	30	30
B8	2	4	56	82	79
C15	3	2	8	13	14
C15	3	3	34	35	35
C15	3	4	80	79	79
C17	3	2	15	16	16
C17	3	3	34	34	34
C17	3	4	81	79	79

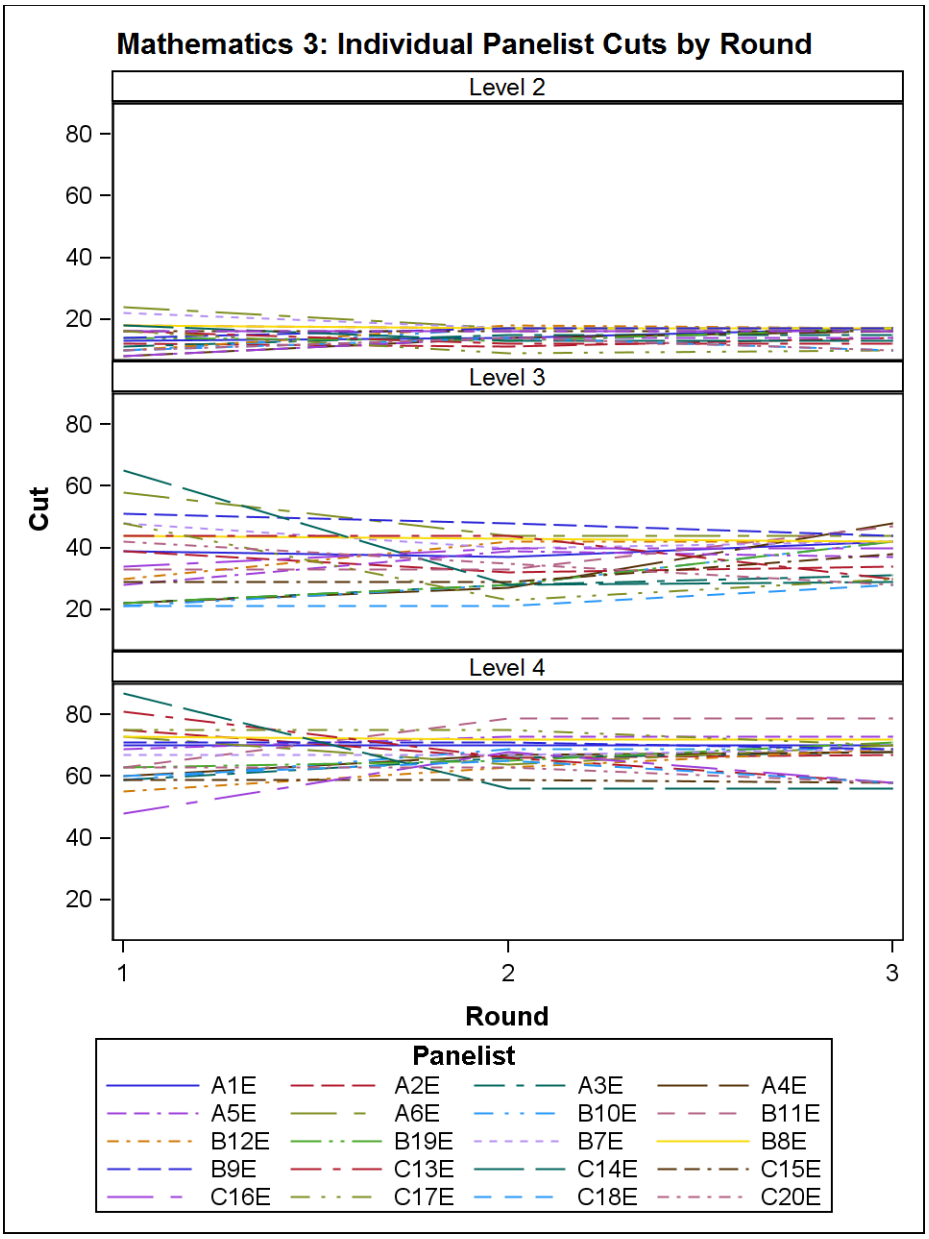
Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
C18	3	2	18	18	15
C18	3	3	57	34	34
C18	3	4	84	81	79
C19	3	2	8	14	16
C19	3	3	15	28	33
C19	3	4	76	83	83
C20	3	2	9	22	16
C20	3	3	19	38	34
C20	3	4	27	91	87
C21	3	2	16	16	14
C21	3	3	36	36	34
C21	3	4	80	79	77

Mathematics I: Individual Panelist Cuts by Round

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
A1	1	2	47	11	13
A1	1	3	66	35	34
A1	1	4	80	59	61
A2	1	2	14	14	12
A2	1	3	37	38	35
A2	1	4	79	79	64
A3	1	2	37	12	11
A3	1	3	59	30	19
A3	1	4	77	70	78
A4	1	2	16	13	13
A4	1	3	23	26	26
A4	1	4	57	64	60
A5	1	2	23	20	17
A5	1	3	44	43	37
A5	1	4	73	73	70
A6	1	2	9	9	5
A6	1	3	31	28	16
A6	1	4	77	61	55
A7	1	2	17	17	13
A7	1	3	43	43	36
A7	1	4	72	72	72
B10	2	2	14	11	5
B10	2	3	44	39	17
B10	2	4	71	69	39
B11	2	2	12	3	3
B11	2	3	21	14	16
B11	2	4	57	46	46
B12	2	2	16	11	11
B12	2	3	37	39	38
B12	2	4	69	69	64
B13	2	2	5	9	5
B13	2	3	33	23	16
B13	2	4	74	48	38
B14	2	2	13	7	2
B14	2	3	27	31	11

Appendix I

Panelist	Table	Level	Rd. 1	Rd. 2	Rd. 3
B14	2	4	46	50	20
B8	2	2	9	12	11
B8	2	3	23	28	23
B8	2	4	72	64	64
B9	2	2	6	6	6
B9	2	3	16	16	16
B9	2	4	46	46	46
C15	3	2	11	10	8
C15	3	3	32	30	30
C15	3	4	76	66	61
C16	3	2	15	15	9
C16	3	3	59	36	28
C16	3	4	78	72	46
C17	3	2	12	12	9
C17	3	3	42	37	30
C17	3	4	92	73	69
C18	3	2	12	12	9
C18	3	3	36	36	31
C18	3	4	72	61	56
C19	3	2	17	13	11
C19	3	3	47	36	31
C19	3	4	74	72	62
C20	3	2	11	11	7
C20	3	3	51	37	29
C20	3	4	63	51	50
C21	3	2	12	12	12
C21	3	3	41	39	29
C21	3	4	88	62	59



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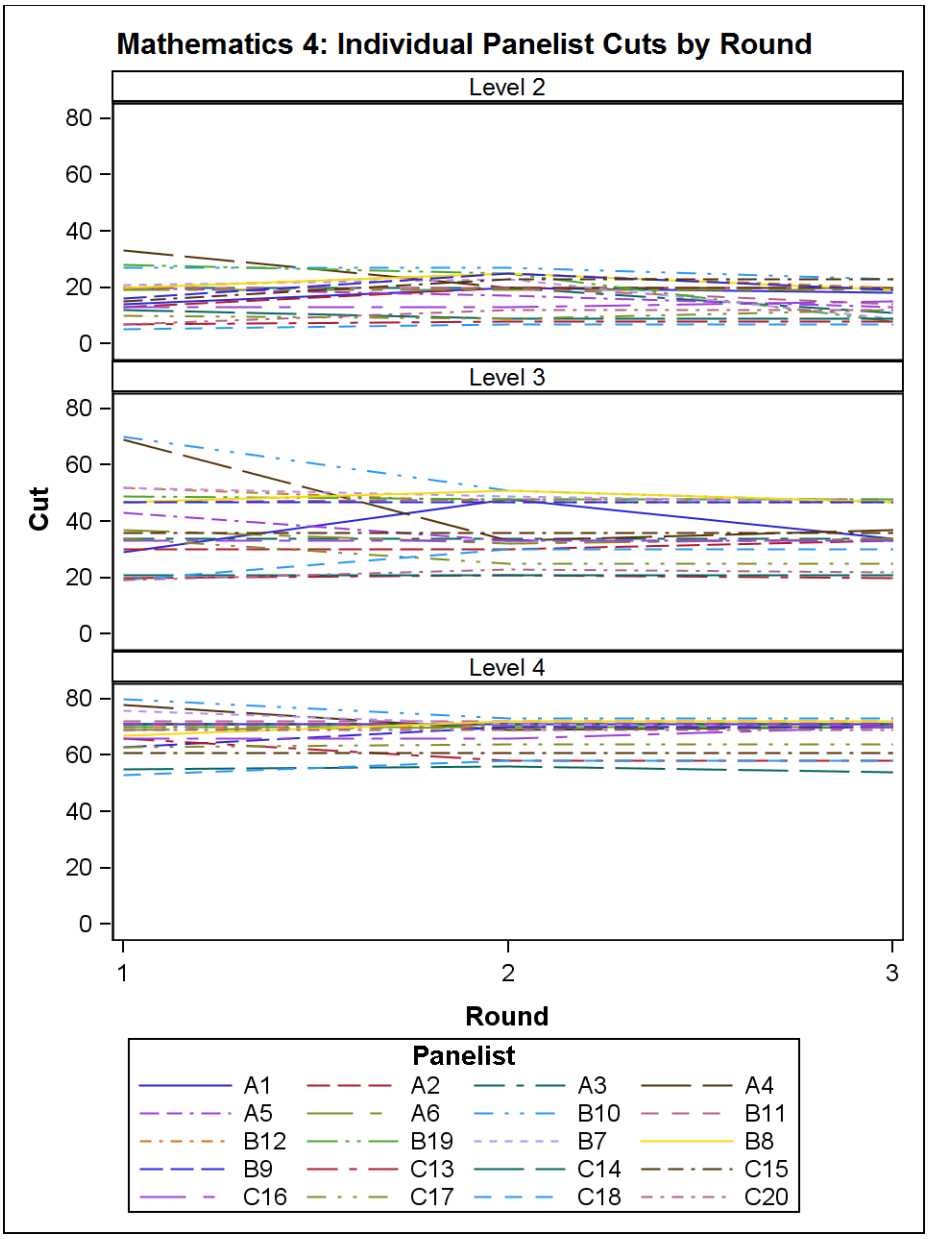

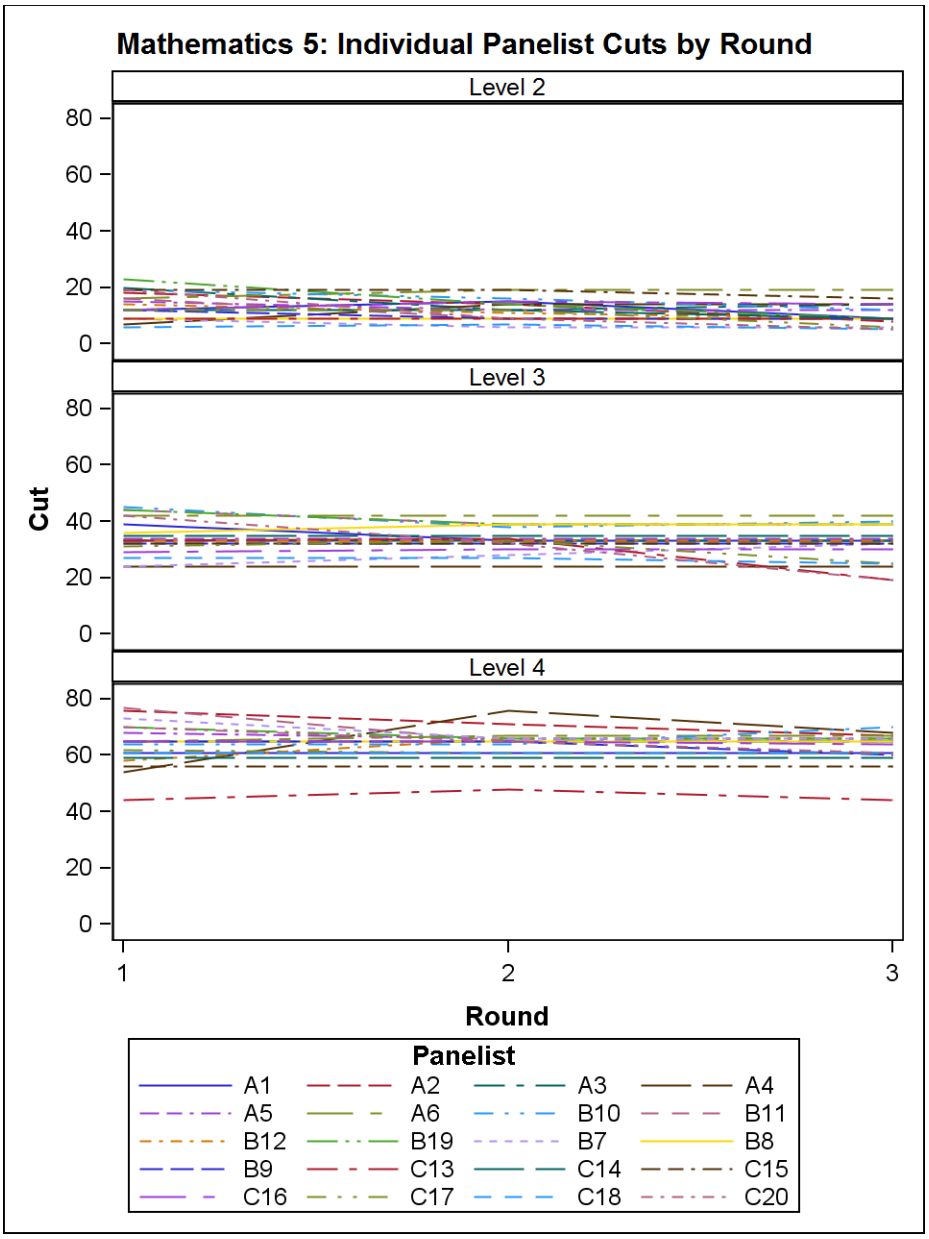

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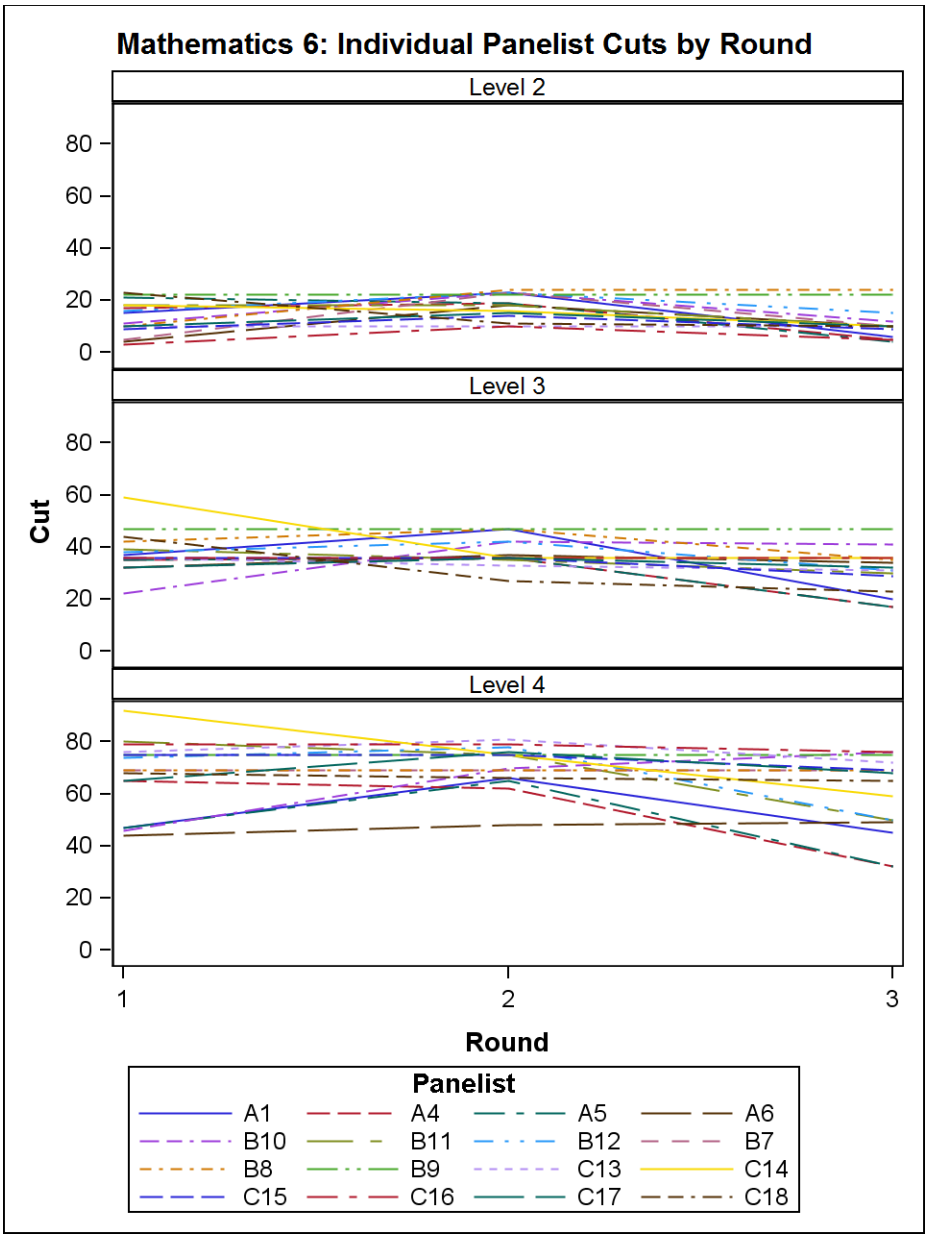

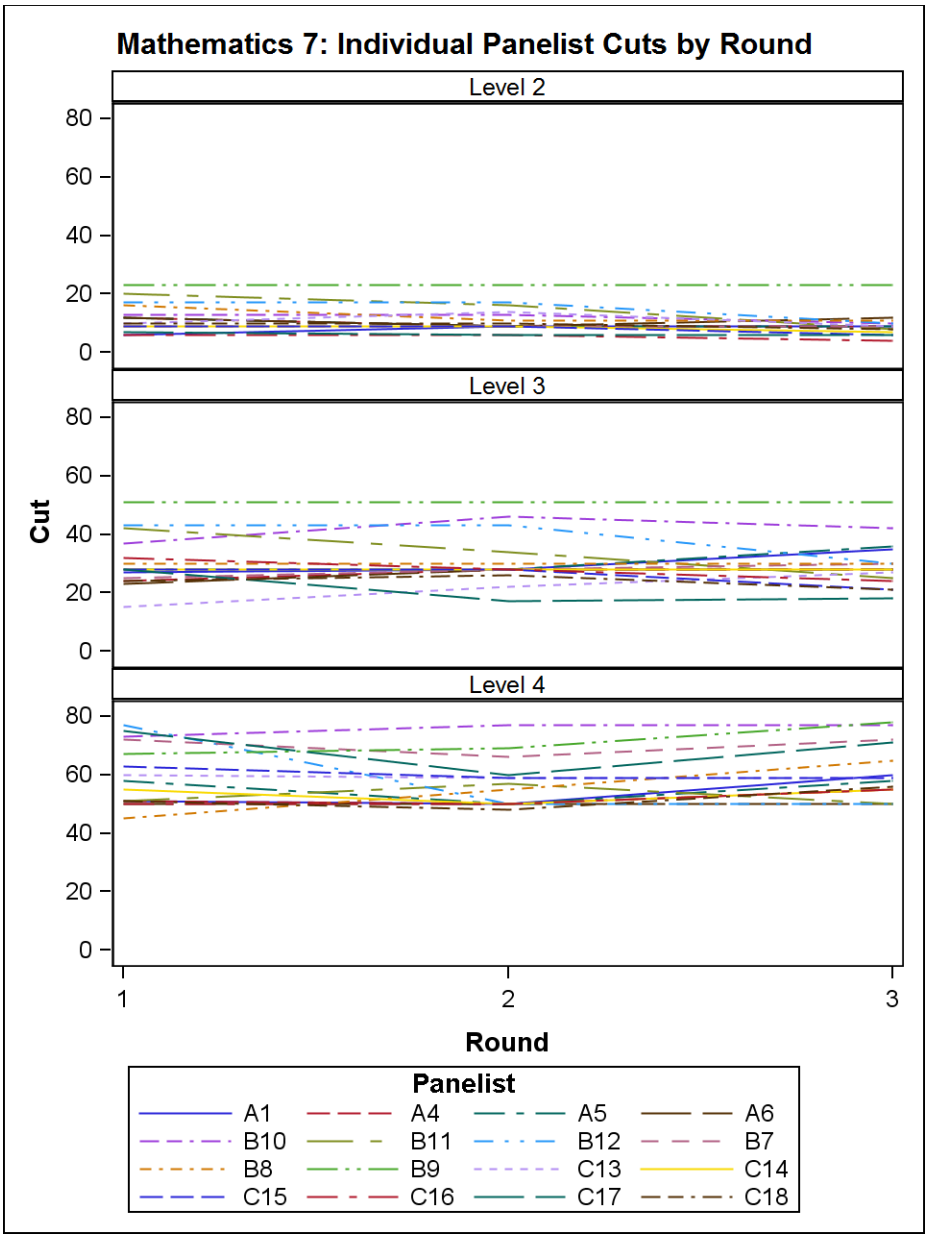

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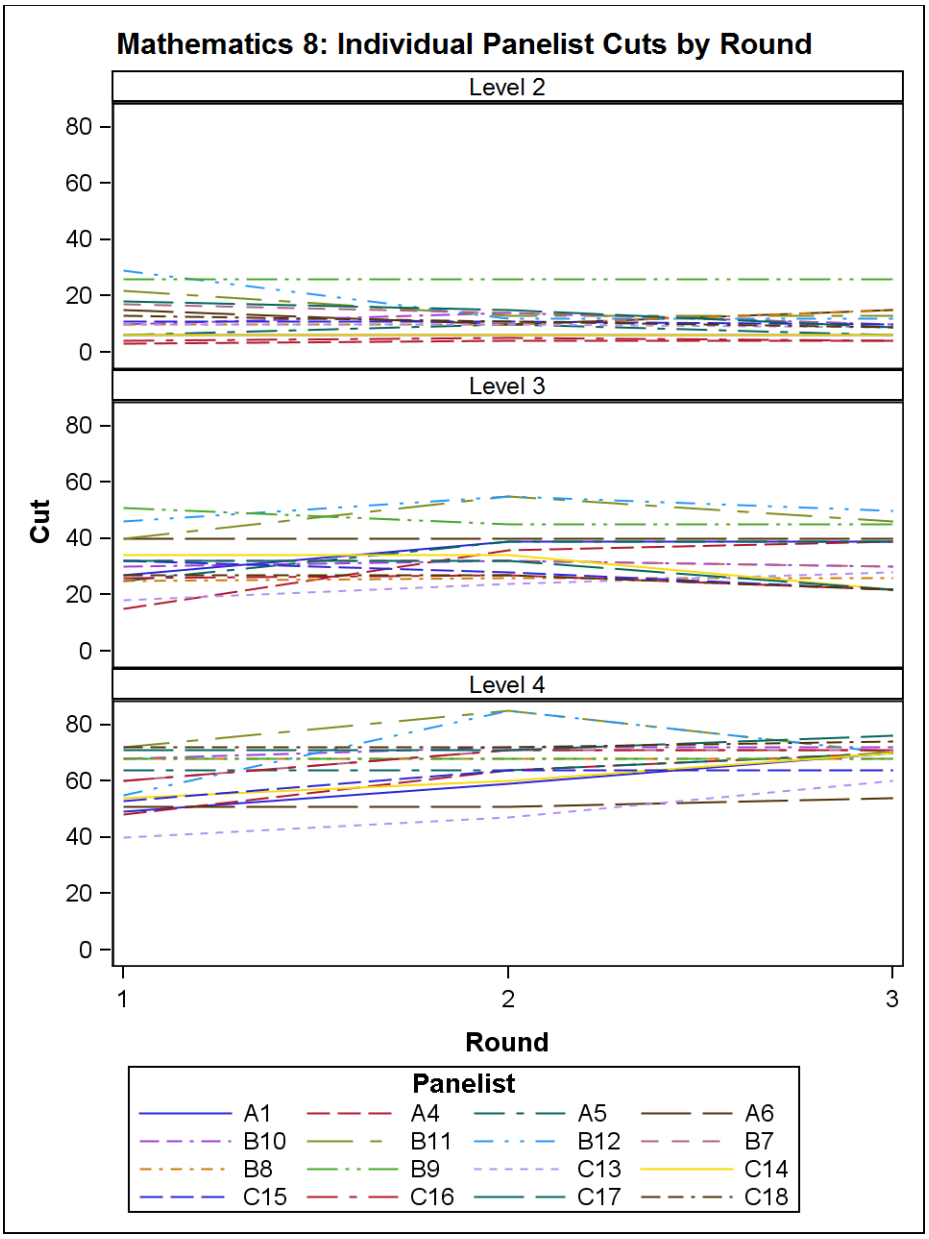

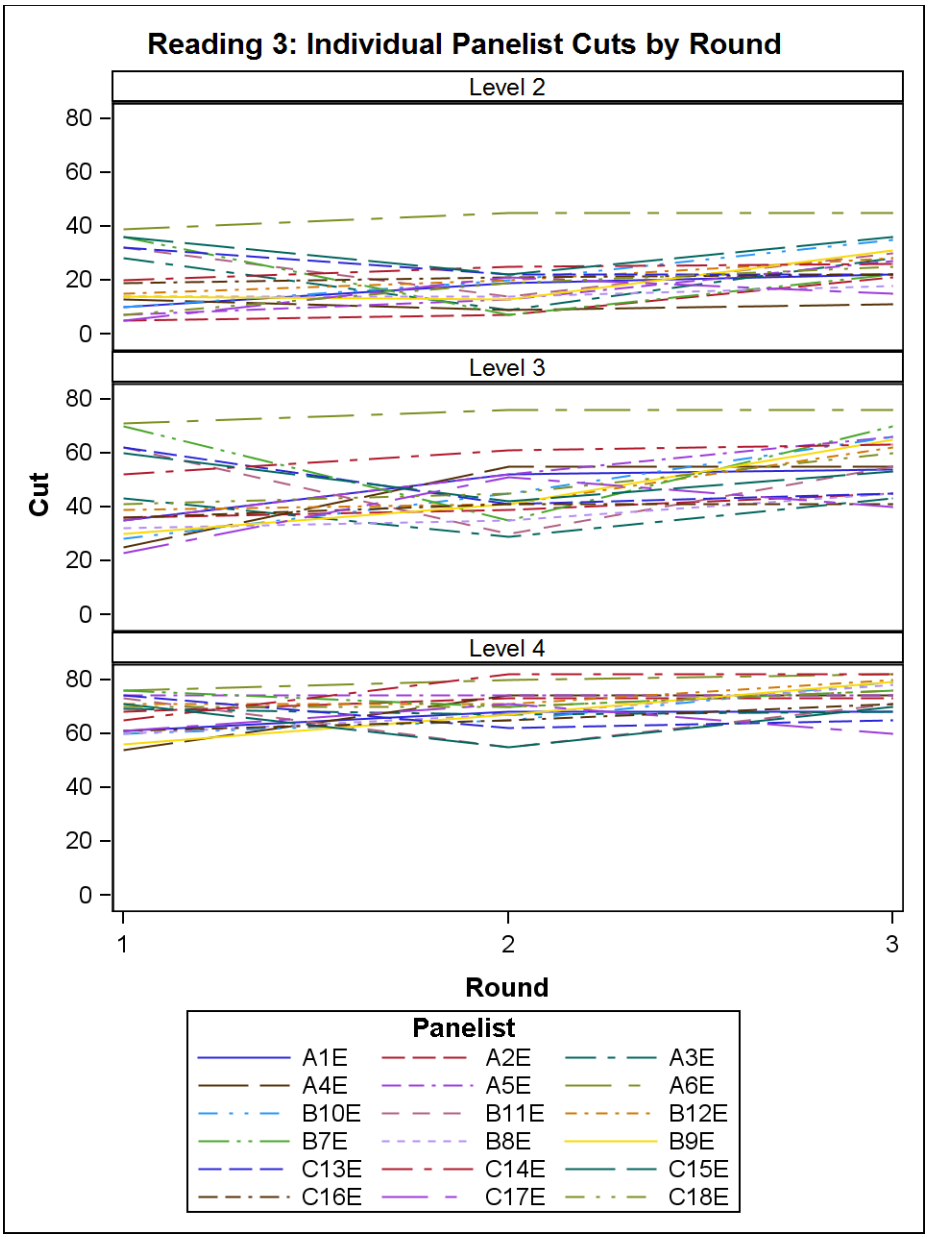

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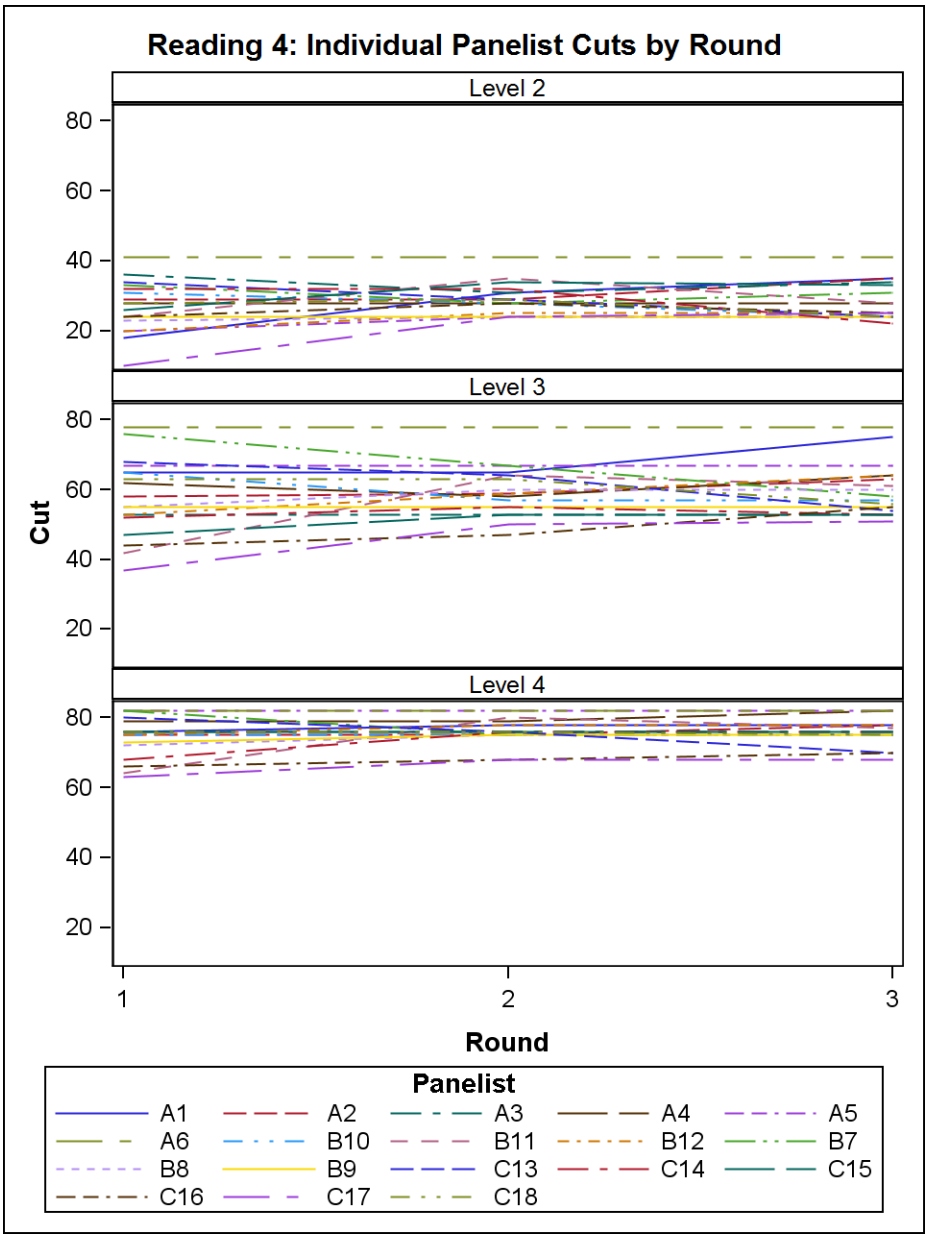
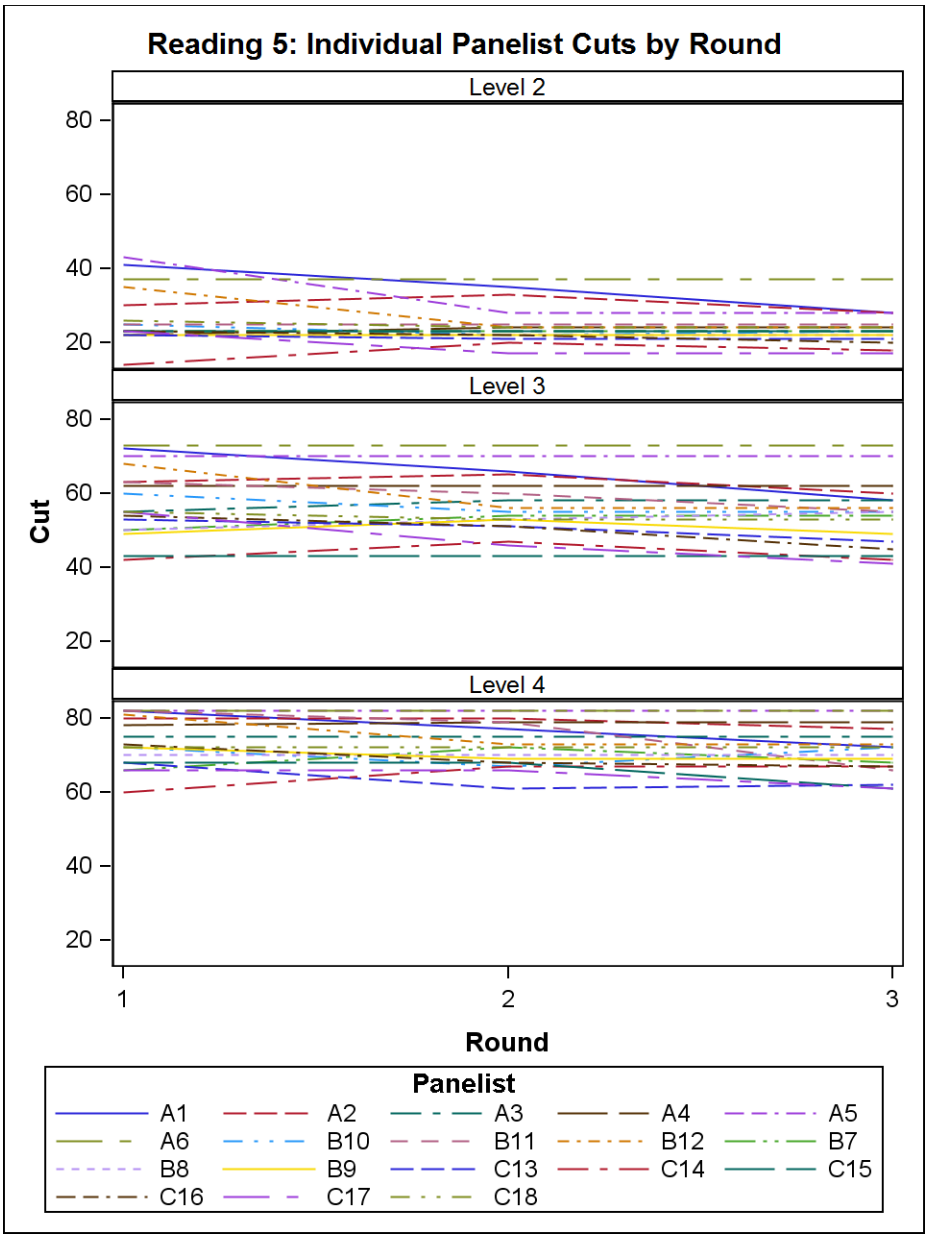
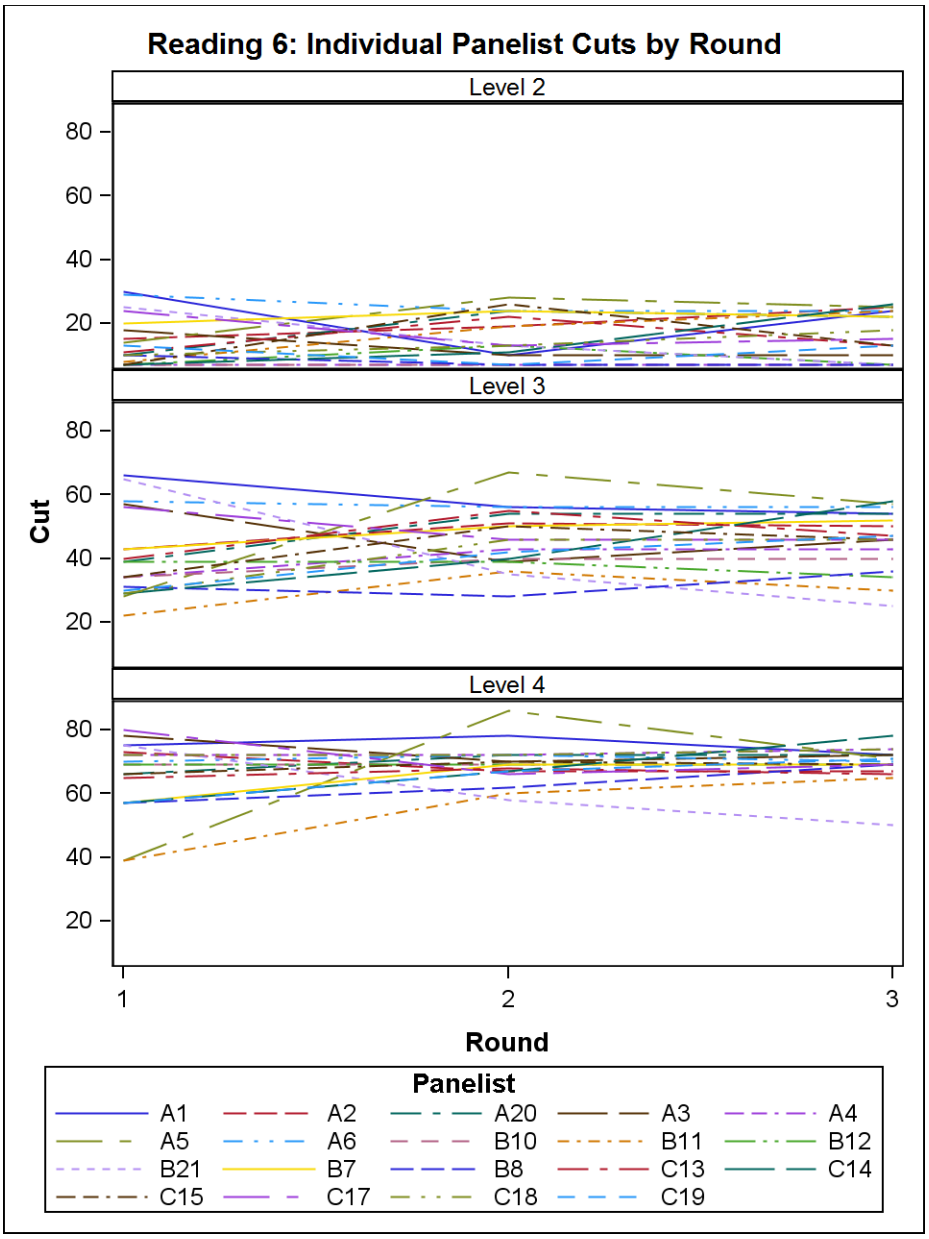
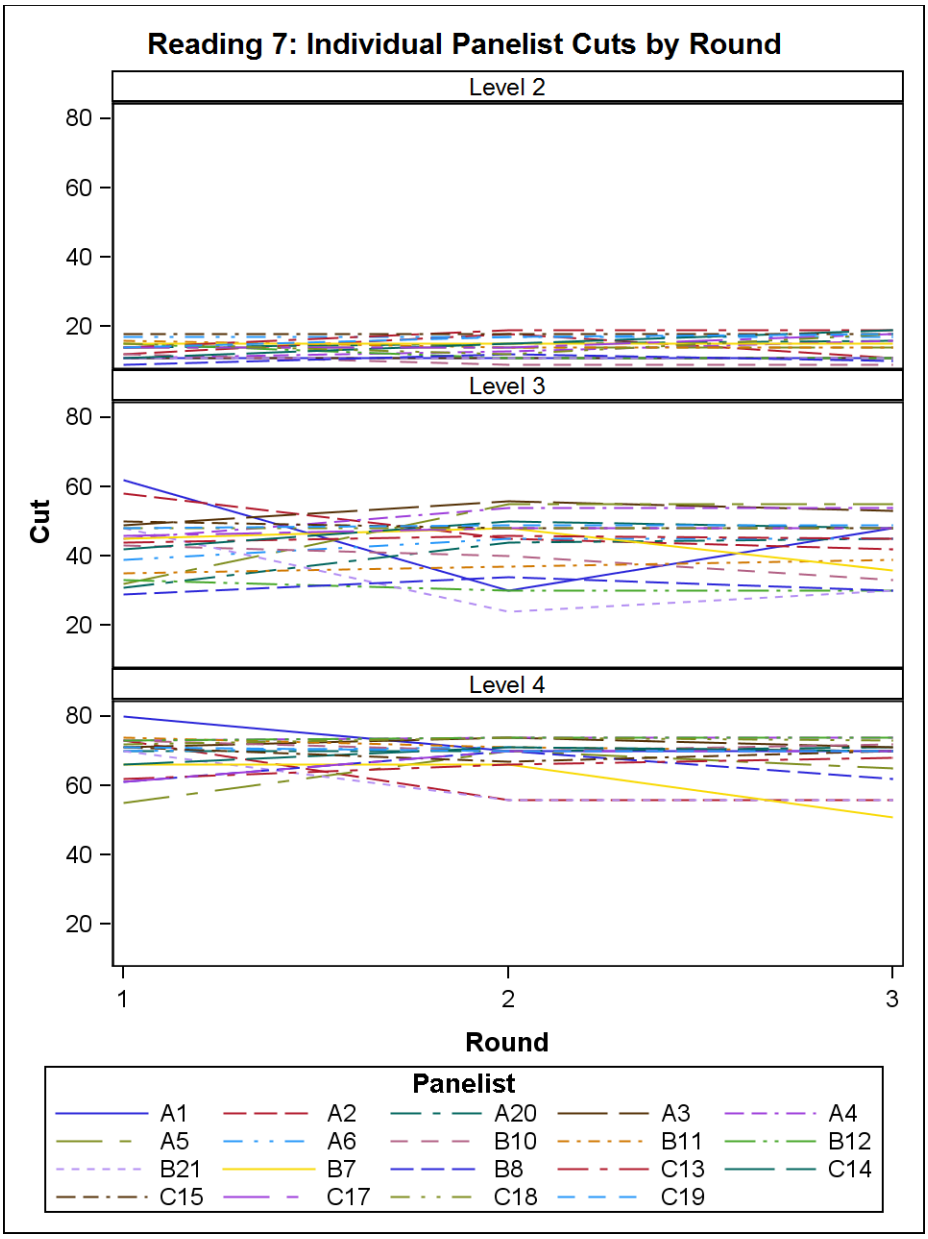


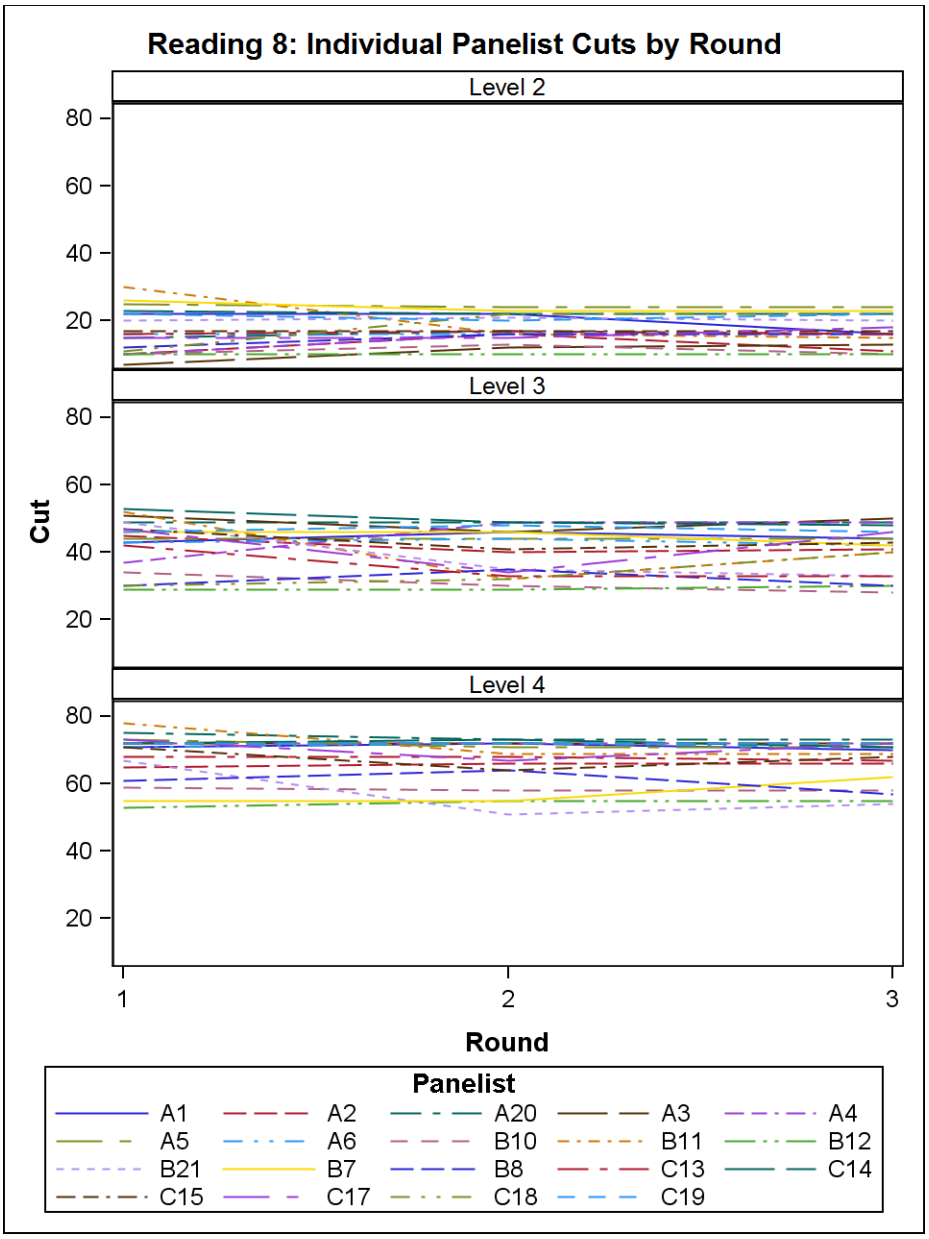

Reading 5: Individual Panelist Cuts by Round
Level 2
Level 3
Level 4
Cut
80
60
40
20
1
2
3
Round
Panelist
A1
A2
A3
A4
A5
A6
B10
B11
B12
B7
B8
B9
C13
C14
C15
C16
C17
C18

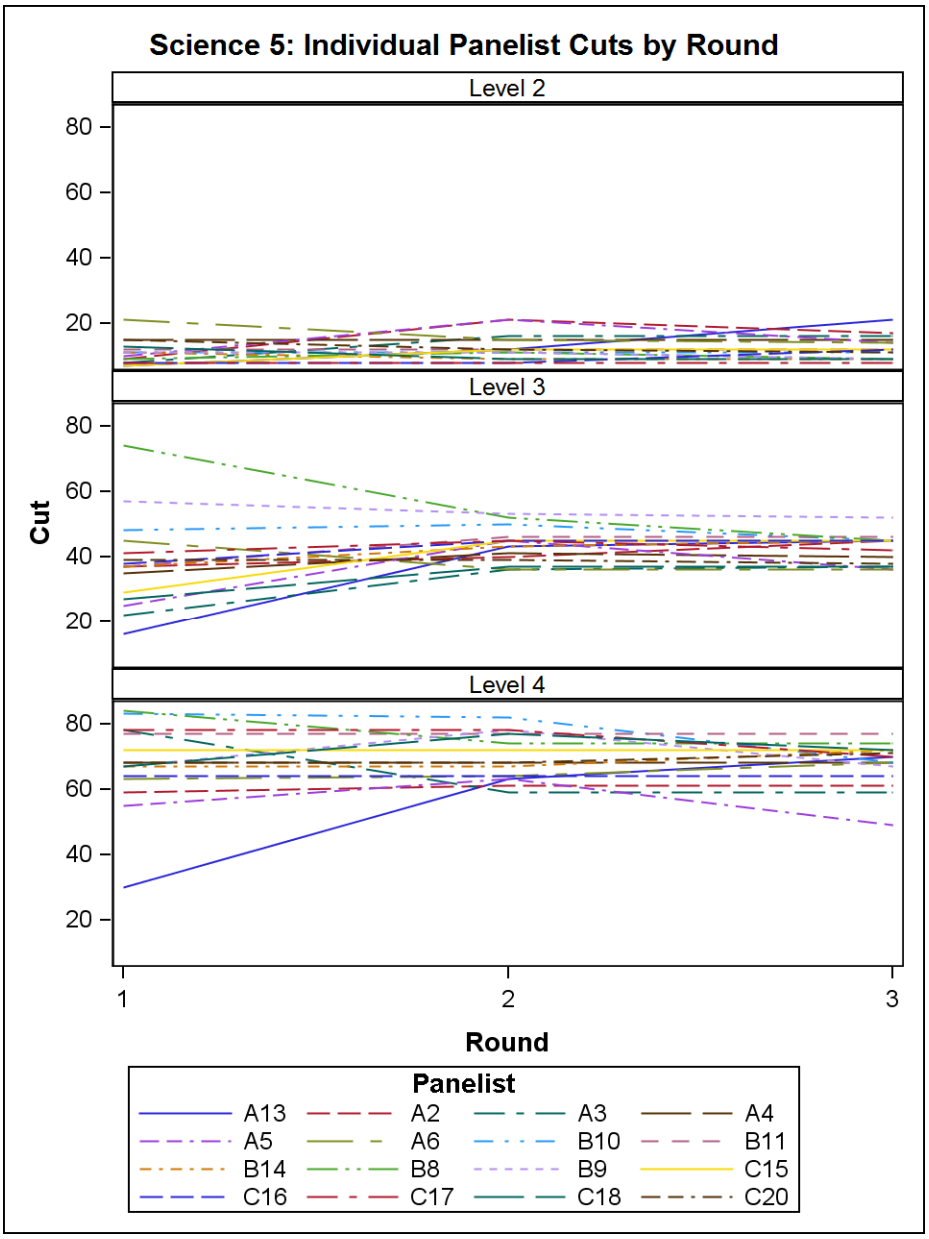
Appendix I



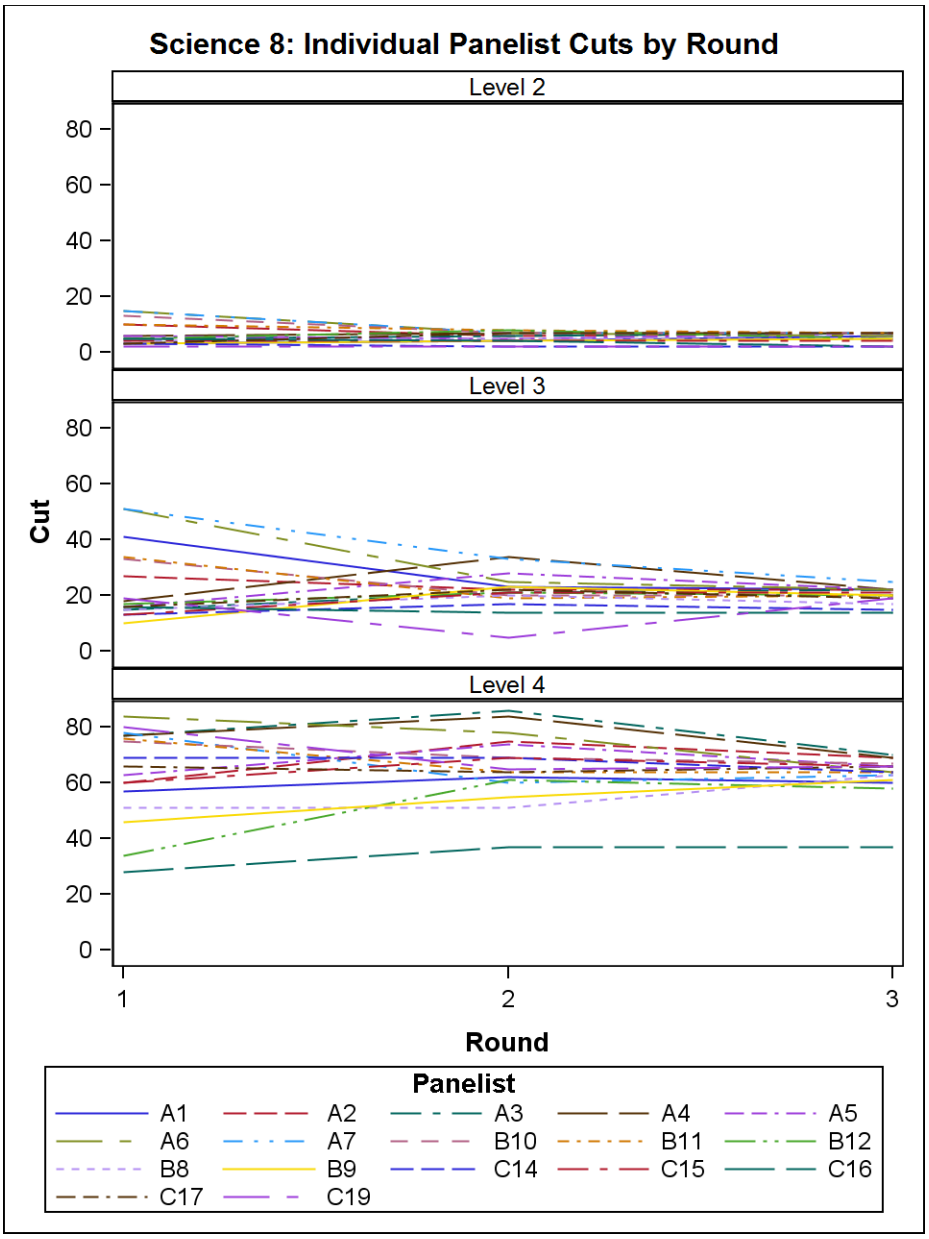

Reading 7: Individual Panelist Cuts by Round
Level 2
Level 3
Level 4
Cut
80
60
40
20
1
2
3
Round
Panelist
A1
A2
A20
A3
A4
A5
A6
B10
B11
B12
B21
B7
B8
C13
C14
C15
C17
C18
C19

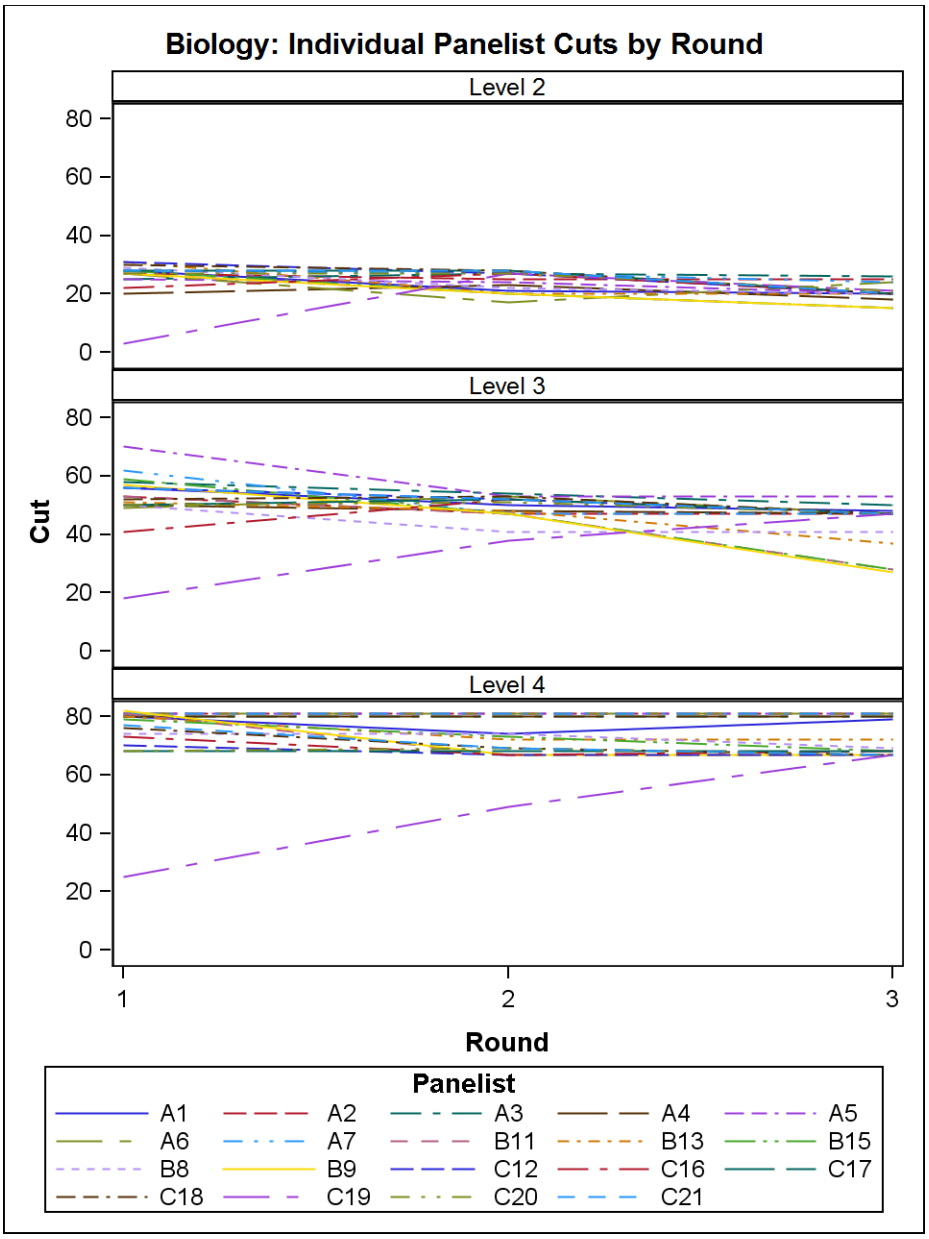
Appendix I



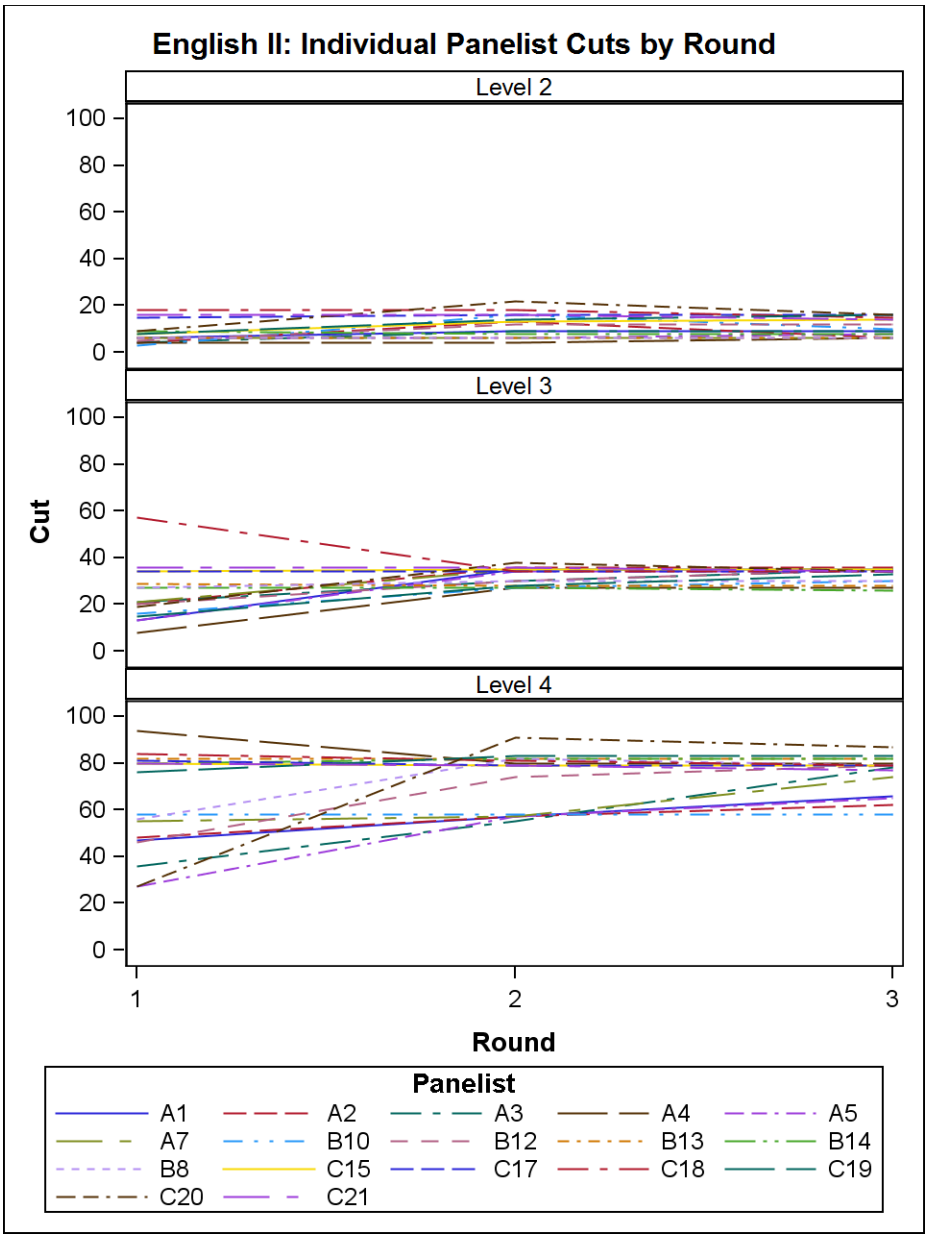


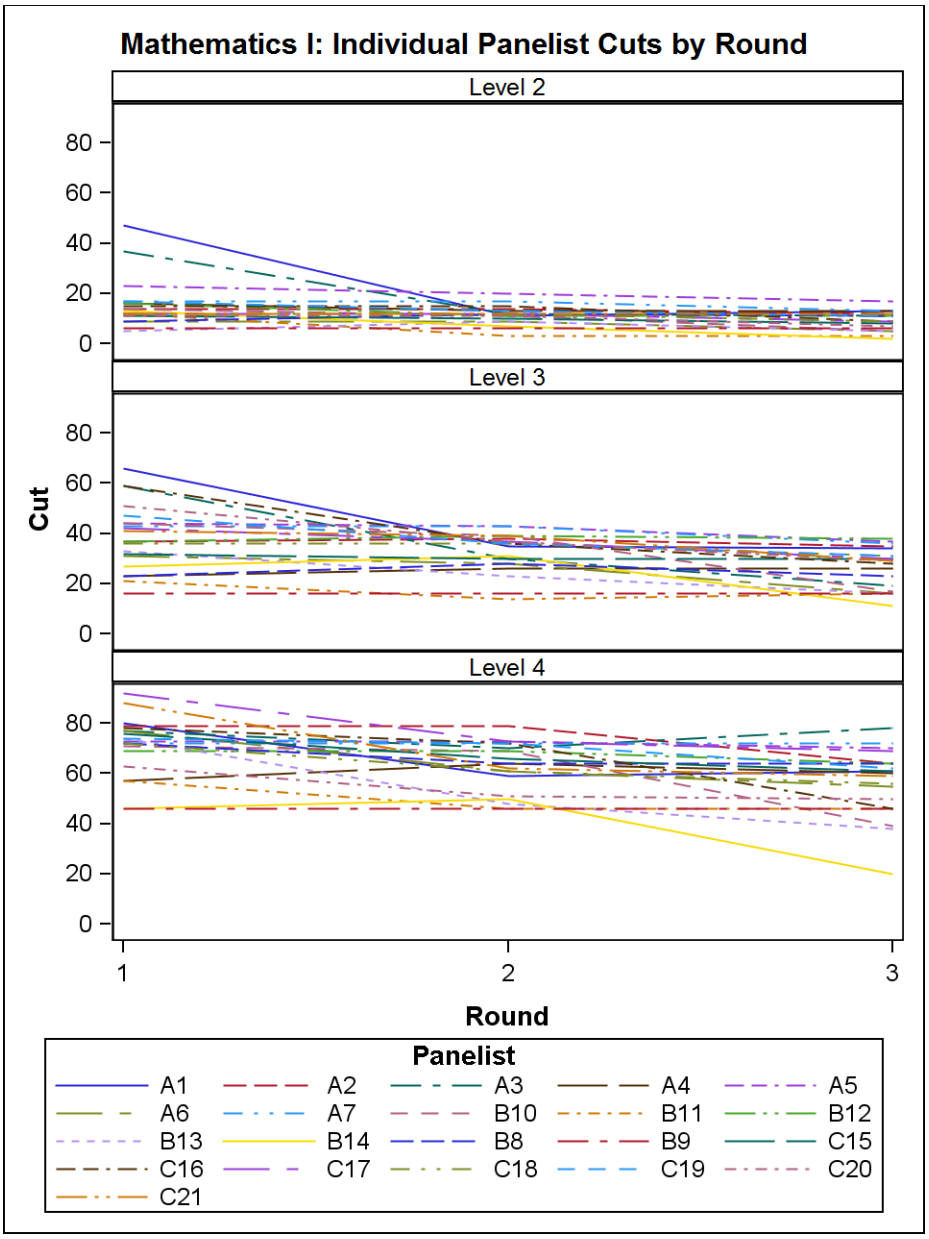
Appendix I





Appendix I





Appendix J: Standard Setting Evaluation Summaries

Evaluation Responses: Mathematics 3

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	8	12
1b.	The training materials contained all the information I needed to complete my assignment.	0	3	7	10
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	12	8
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	11	9
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	3	11	6
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	1	10	9
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	1	10	9
1h.	I could clearly distinguish between achievement levels.	0	4	13	3
1i.	The descriptions of achievement levels were clear to me.	0	4	11	4

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	3	11	6
2b.	Instructions provided by the facilitators.	0	2	14	4
2c.	Description of achievement level descriptors.	0	4	11	5

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	3	17
3b.	Practicing the item mapping process	2	3	15
3c.	Training materials	0	11	9
3d.	Table discussions	0	1	19
3e.	Large group discussions	0	6	14

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	1	8	11
4b.	Your perception of the difficulty of the items	0	8	12
4c.	Your experiences with students	1	2	17
4d.	Table discussions	0	5	15
4e.	Large group discussions	0	13	7
4f.	Agreement feedback data	2	7	11
4g.	Impact data	2	7	10

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	2	0	18
6b.	Scoring the assessment	2	0	18
6c.	Training on the item mapping process	0	3	17
6d.	Table discussions on feedback	2	1	17
6e.	Group discussions on feedback	3	2	15

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	3	14	1

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	3	17

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	5	15

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	1	1	8	10

Achievement Level Cut	**Comfortable**	**Move Before**	**Average # of pages**	**Move After**	**Average # of Pages**	**No Response**
Level 2	2	2	3	1	5	15
Level 3	3	1	7	1	10	15
Level 4	2	1	13	2	8	15

Appendix J

Evaluation Responses: Mathematics 4

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	5	15
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	7	13
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	10	10
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	12	8
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	13	7
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	1	7	12
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	1	5	14
1h.	I could clearly distinguish between achievement levels.	0	9	9	2
1i.	The descriptions of achievement levels were clear to me.	0	1	14	5

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	4	16
2b.	Instructions provided by the facilitators.	0	1	4	15
2c.	Description of achievement level descriptors.	0	0	14	6

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	0	20
3b.	Practicing the item mapping process	1	3	16
3c.	Training materials	0	8	12
3d.	Table discussions	0	1	19
3e.	Large group discussions	0	9	11

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	13	7
4b.	Your perception of the difficulty of the items	0	6	14
4c.	Your experiences with students	1	2	17
4d.	Table discussions	0	7	13
4e.	Large group discussions	0	12	8
4f.	Agreement feedback data	0	10	10
4g.	Impact data	1	11	8

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	1	0	19
6b.	Scoring the assessment	3	0	17
6c.	Training on the item mapping process	1	0	19
6d.	Table discussions on feedback	1	1	18
6e.	Group discussions on feedback	3	0	17

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	4	15	1

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	6	14

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	5	15

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	1	6	11	2

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	1	4	4	2	5	13
Level 3	2	4	2	1	10	13
Level 4	5	2	10	-	-	13

Evaluation Responses: Mathematics 5

1. Please read each of the following statements carefully. Place an X in <u>one</u> box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	2	18
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	4	16
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	8	12
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	8	12
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	9	11
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	4	16
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	6	14
1h.	I could clearly distinguish between achievement levels.	0	5	12	3
1i.	The descriptions of achievement levels were clear to me.	0	2	12	6

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	4	16
2b.	Instructions provided by the facilitators.	0	0	3	17
2c.	Description of achievement level descriptors.	0	1	8	11

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	0	20
3b.	Practicing the item mapping process	1	5	14
3c.	Training materials	0	6	14
3d.	Table discussions	0	1	19
3e.	Large group discussions	0	5	15

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	9	11
4b.	Your perception of the difficulty of the items	0	3	17
4c.	Your experiences with students	0	5	15
4d.	Table discussions	0	3	17
4e.	Large group discussions	0	6	14
4f.	Agreement feedback data	0	5	15
4g.	Impact data	1	5	14

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	1	19
6b.	Scoring the assessment	0	0	20
6c.	Training on the item mapping process	0	1	19
6d.	Table discussions on feedback	1	0	19
6e.	Group discussions on feedback	2	0	18

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	1	15	4

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	2	18

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	5	15

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	3	8	9

Achievement Level Cut	**Comfortable**	**Move Before**	**Average # of pages**	**Move After**	**Average # of Pages**	**No Response**
Level 2	6	-	-	1	3	13
Level 3	5	1	14	1	20	13
Level 4	3	3	5	1	2	13

Appendix J

Evaluation Responses: Mathematics 6

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	9	7
1b.	The training materials contained all the information I needed to complete my assignment.	0	1	10	5
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	1	11	4
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	11	5
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	10	5
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	11	5
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	12	4
1h.	I could clearly distinguish between achievement levels.	0	4	8	4
1i.	The descriptions of achievement levels were clear to me.	0	2	8	6

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	9	7
2b.	Instructions provided by the facilitators.	0	0	10	6
2c.	Description of achievement level descriptors.	0	1	9	6

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	5	11
3b.	Practicing the item mapping process	2	7	7
3c.	Training materials	0	7	9
3d.	Table discussions	1	0	15
3e.	Large group discussions	0	3	13

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	2	4	10
4b.	Your perception of the difficulty of the items	0	4	12
4c.	Your experiences with students	1	3	12
4d.	Table discussions	1	2	13
4e.	Large group discussions	0	4	12
4f.	Agreement feedback data	0	3	13
4g.	Impact data	0	4	12

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	1	3	12
6b.	Scoring the assessment	1	2	13
6c.	Training on the item mapping process	0	1	15
6d.	Table discussions on feedback	1	0	15
6e.	Group discussions on feedback	3	0	13

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	3	11	1

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	11	4

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	1	8	6

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	1	7	7	0

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	4	4	5	-	-	8
Level 3	3	4	3	-	-	9
Level 4	5	1	9	1	4	9

Evaluation Responses: Mathematics 7

1. Please read each of the following statements carefully. Place an X in <u>one</u> box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	4	12
1b.	The training materials contained all the information I needed to complete my assignment.	0	1	5	10
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	7	9
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	8	8
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	7	8
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	9	7
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	7	9
1h.	I could clearly distinguish between achievement levels.	0	2	8	6
1i.	The descriptions of achievement levels were clear to me.	0	1	9	6

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	8	8
2b.	Instructions provided by the facilitators.	0	0	7	9
2c.	Description of achievement level descriptors.	0	0	12	4

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	3	13
3b.	Practicing the item mapping process	1	4	11
3c.	Training materials	0	7	9
3d.	Table discussions	0	2	14
3e.	Large group discussions	0	3	13

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	1	3	12
4b.	Your perception of the difficulty of the items	0	4	12
4c.	Your experiences with students	0	5	11
4d.	Table discussions	1	2	13
4e.	Large group discussions	1	5	10
4f.	Agreement feedback data	0	4	12
4g.	Impact data	0	1	15

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	2	14
6b.	Scoring the assessment	1	1	14
6c.	Training on the item mapping process	0	1	15
6d.	Table discussions on feedback	0	0	16
6e.	Group discussions on feedback	0	0	16

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	2	1	11	2

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	10	6

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	8	8

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	3	4	8	1

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	6	3	4	1	14	6
Level 3	6	3	4	1	23	5
Level 4	1	-	-	9	7	4

Appendix J

Evaluation Responses: Mathematics 8

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	6	10
1b.	The training materials contained all the information I needed to complete my assignment.	0	1	6	9
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	7	9
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	8	8
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	9	7
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	9	7
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	8	8
1h.	I could clearly distinguish between achievement levels.	0	3	8	5
1i.	The descriptions of achievement levels were clear to me.	0	2	9	5

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	6	10
2b.	Instructions provided by the facilitators.	0	0	4	12
2c.	Description of achievement level descriptors.	0	0	6	10

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	3	13
3b.	Practicing the item mapping process	0	5	11
3c.	Training materials	0	3	13
3d.	Table discussions	1	0	15
3e.	Large group discussions	0	1	15

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	3	13
4b.	Your perception of the difficulty of the items	0	2	14
4c.	Your experiences with students	0	4	12
4d.	Table discussions	1	2	13
4e.	Large group discussions	0	2	14
4f.	Agreement feedback data	0	2	14
4g.	Impact data	0	1	15

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	1	1	13
6b.	Scoring the assessment	2	0	13
6c.	Training on the item mapping process	0	0	15
6d.	Table discussions on feedback	1	1	13
6e.	Group discussions on feedback	2	0	13

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	1	4	6	4

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	1	5	9

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	1	5	9

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	2	3	8	2

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	2	4	3	2	10	8
Level 3	1	4	4	3	6	8
Level 4	6	-	-	2	3	8

Evaluation Responses: Reading 3

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	2	16
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	4	14
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	3	15
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	5	13
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	9	9
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	1	17
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	3	15
1h.	I could clearly distinguish between achievement levels.	0	0	11	7
1i.	The descriptions of achievement levels were clear to me.	0	0	11	6

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	1	0	2	15
2b.	Instructions provided by the facilitators.	1	0	0	17
2c.	Description of achievement level descriptors.	1	0	6	11

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	0	18
3b.	Practicing the item mapping process	0	2	16
3c.	Training materials	0	2	16
3d.	Table discussions	0	2	16
3e.	Large group discussions	0	1	17

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	3	15
4b.	Your perception of the difficulty of the items	0	3	15
4c.	Your experiences with students	1	5	12
4d.	Table discussions	0	2	16
4e.	Large group discussions	0	3	15
4f.	Agreement feedback data	0	2	16
4g.	Impact data	0	0	18

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	1	16
6b.	Scoring the assessment	0	1	16
6c.	Training on the item mapping process	0	0	17
6d.	Table discussions on feedback	3	0	14
6e.	Group discussions on feedback	0	0	17

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	1	9	5

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	4	12

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	2	14

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	1	3	12

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	6	-	-	1	10	11
Level 3	6	-	-	1	10	11
Level 4	7	-	-	-	-	11

Appendix J

Evaluation Responses: Reading 4

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	1	16
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	3	14
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	2	15
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	3	14
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	2	14
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	2	15
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	2	15
1h.	I could clearly distinguish between achievement levels.	0	0	3	14
1i.	The descriptions of achievement levels were clear to me.	0	0	3	14

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	1	16
2b.	Instructions provided by the facilitators.	0	0	0	17
2c.	Description of achievement level descriptors.	0	0	4	13

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	0	17
3b.	Practicing the item mapping process	0	0	17
3c.	Training materials	0	1	16
3d.	Table discussions	0	0	17
3e.	Large group discussions	0	3	14

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	5	12
4b.	Your perception of the difficulty of the items	0	4	13
4c.	Your experiences with students	0	5	12
4d.	Table discussions	0	2	15
4e.	Large group discussions	1	4	12
4f.	Agreement feedback data	0	2	15
4g.	Impact data	0	4	13

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	3	14
6b.	Scoring the assessment	0	0	17
6c.	Training on the item mapping process	0	1	16
6d.	Table discussions on feedback	0	0	17
6e.	Group discussions on feedback	1	0	16

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	0	12	4

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	4	13

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	3	14

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	1	5	11

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	6	1	4	-	-	10
Level 3	6	1	6	-	-	10
Level 4	6	1	5	-	-	10

Evaluation Responses: Reading 5

1. Please read each of the following statements carefully. Place an X in <u>one</u> box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	1	17
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	4	14
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	5	13
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	4	14
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	5	12
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	3	15
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	4	14
1h.	I could clearly distinguish between achievement levels.	0	1	7	10
1i.	The descriptions of achievement levels were clear to me.	0	0	8	10

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	2	15
2b.	Instructions provided by the facilitators.	0	0	1	16
2c.	Description of achievement level descriptors.	0	0	3	14

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	0	17
3b.	Practicing the item mapping process	0	1	16
3c.	Training materials	0	3	14
3d.	Table discussions	0	0	17
3e.	Large group discussions	0	4	13

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	1	2	14
4b.	Your perception of the difficulty of the items	0	3	13
4c.	Your experiences with students	0	6	11
4d.	Table discussions	0	1	16
4e.	Large group discussions	0	5	12
4f.	Agreement feedback data	0	4	13
4g.	Impact data	0	6	11

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	3	14
6b.	Scoring the assessment	0	0	17
6c.	Training on the item mapping process	0	0	17
6d.	Table discussions on feedback	0	0	17
6e.	Group discussions on feedback	3	0	14

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	1	10	5

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	5	12

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	6	11

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	0	8	9

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	7	-	-	-	-	11
Level 3	6	1	48	-	-	11
Level 4	7	-	-	-	-	11

Appendix J

Evaluation Responses: Reading 6

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	4	15
1b.	The training materials contained all the information I needed to complete my assignment.	0	2	6	10
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	8	11
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	2	5	12
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	8	9
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	7	12
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	8	11
1h.	I could clearly distinguish between achievement levels.	0	0	14	5
1i.	The descriptions of achievement levels were clear to me.	0	2	11	5

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	1	3	4	11
2b.	Instructions provided by the facilitators.	1	4	4	10
2c.	Description of achievement level descriptors.	1	3	6	9

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	6	13
3b.	Practicing the item mapping process	0	5	14
3c.	Training materials	0	4	15
3d.	Table discussions	0	4	15
3e.	Large group discussions	0	7	12

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	3	16
4b.	Your perception of the difficulty of the items	0	5	14
4c.	Your experiences with students	1	9	9
4d.	Table discussions	1	6	12
4e.	Large group discussions	1	9	9
4f.	Agreement feedback data	0	6	13
4g.	Impact data	1	6	12

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	1	8	10
6b.	Scoring the assessment	0	4	15
6c.	Training on the item mapping process	0	4	15
6d.	Table discussions on feedback	1	2	16
6e.	Group discussions on feedback	1	0	18

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	2	13	3

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	1	0	5	13

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	1	0	5	13

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	1	8	10

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	6	-	-	-	-	13
Level 3	4	1	-	-	-	14
Level 4	3	2	-	-	-	14

Evaluation Responses: Reading 7

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	2	17
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	3	16
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	5	14
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	3	16
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	4	14
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	2	17
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	3	16
1h.	I could clearly distinguish between achievement levels.	0	1	9	9
1i.	The descriptions of achievement levels were clear to me.	0	2	6	10

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	1	2	16
2b.	Instructions provided by the facilitators.	0	1	1	17
2c.	Description of achievement level descriptors.	0	2	3	13

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	1	18
3b.	Practicing the item mapping process	1	5	13
3c.	Training materials	0	3	16
3d.	Table discussions	0	0	19
3e.	Large group discussions	1	10	8

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	2	17
4b.	Your perception of the difficulty of the items	0	5	14
4c.	Your experiences with students	0	10	9
4d.	Table discussions	0	3	15
4e.	Large group discussions	2	10	7
4f.	Agreement feedback data	0	4	15
4g.	Impact data	0	4	15

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	1	18
6b.	Scoring the assessment	0	0	19
6c.	Training on the item mapping process	0	0	19
6d.	Table discussions on feedback	0	1	18
6e.	Group discussions on feedback	3	1	15

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	1	11	7

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	5	14

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	5	14

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	1	9	9

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	5	1	5	1	5	12
Level 3	3	-	-	3	2	13
Level 4	4	2	3	-	-	13

Appendix J

Evaluation Responses: Reading 8

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	1	0	1	17
1b.	The training materials contained all the information I needed to complete my assignment.	1	0	1	17
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	1	0	2	16
1d.	The training on the content standards gave me the information I needed to complete my assignment.	1	0	2	16
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	1	0	4	14
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	1	0	3	15
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	1	0	3	15
1h.	I could clearly distinguish between achievement levels.	1	0	6	12
1i.	The descriptions of achievement levels were clear to me.	1	1	4	13

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	1	1	17
2b.	Instructions provided by the facilitators.	0	1	1	17
2c.	Description of achievement level descriptors.	0	2	1	16

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	1	18
3b.	Practicing the item mapping process	1	3	15
3c.	Training materials	0	4	15
3d.	Table discussions	0	2	17
3e.	Large group discussions	2	6	11

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	2	17
4b.	Your perception of the difficulty of the items	0	5	14
4c.	Your experiences with students	0	11	8
4d.	Table discussions	0	4	15
4e.	Large group discussions	2	10	7
4f.	Agreement feedback data	0	5	14
4g.	Impact data	0	6	13

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	0	19
6b.	Scoring the assessment	0	0	19
6c.	Training on the item mapping process	0	0	19
6d.	Table discussions on feedback	0	0	19
6e.	Group discussions on feedback	0	0	19

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	0	12	7

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	8	11

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	7	12

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	0	10	9

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	5	1	2	-	-	13
Level 3	3	3	2	-	-	13
Level 4	5	1	2	-	-	13

Evaluation Responses: Science 5

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	13	3
1b.	The training materials contained all the information I needed to complete my assignment.	0	3	7	5
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	2	9	4
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	10	5
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	11	3
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	12	4
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	13	3
1h.	I could clearly distinguish between achievement levels.	0	4	10	2
1i.	The descriptions of achievement levels were clear to me.	0	4	10	2

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	1	1	8	6
2b.	Instructions provided by the facilitators.	2	4	8	2
2c.	Description of achievement level descriptors.	0	1	12	3

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	1	5	9
3b.	Practicing the item mapping process	1	5	10
3c.	Training materials	1	6	8
3d.	Table discussions	0	1	15
3e.	Large group discussions	0	2	14

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	6	10
4b.	Your perception of the difficulty of the items	0	7	9
4c.	Your experiences with students	1	4	11
4d.	Table discussions	0	5	11
4e.	Large group discussions	0	6	10
4f.	Agreement feedback data	0	6	10
4g.	Impact data	0	5	11

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	1	0	14
6b.	Scoring the assessment	0	1	14
6c.	Training on the item mapping process	1	2	12
6d.	Table discussions on feedback	0	5	11
6e.	Group discussions on feedback	1	2	12

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	2	9	1

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	1	0	6	8

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	1	0	6	9

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	5	8	3

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	3	6	2	-	-	7
Level 3	5	3	4	-	-	8
Level 4	4	3	3	1	-	8

Appendix J

Evaluation Responses: Science 8

1. Please read each of the following statements carefully. Place an X in <u>one</u> box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	7	10
1b.	The training materials contained all the information I needed to complete my assignment.	0	3	9	5
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	2	10	5
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	1	11	5
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	2	11	4
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	10	7
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	10	7
1h.	I could clearly distinguish between achievement levels.	0	1	13	3
1i.	The descriptions of achievement levels were clear to me.	0	1	10	6

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	3	7	7
2b.	Instructions provided by the facilitators.	0	3	6	8
2c.	Description of achievement level descriptors.	0	3	7	7

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	9	8
3b.	Practicing the item mapping process	1	8	8
3c.	Training materials	0	9	8
3d.	Table discussions	0	2	15
3e.	Large group discussions	0	6	11

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	8	9
4b.	Your perception of the difficulty of the items	0	7	10
4c.	Your experiences with students	0	6	11
4d.	Table discussions	0	5	12
4e.	Large group discussions	0	8	9
4f.	Agreement feedback data	0	8	9
4g.	Impact data	0	9	8

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	4	1	12
6b.	Scoring the assessment	1	2	14
6c.	Training on the item mapping process	1	6	10
6d.	Table discussions on feedback	2	3	12
6e.	Group discussions on feedback	4	2	11

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	0	13	3

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	5	12

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	6	11

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	2	5	8

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	7	1	19	-	-	9
Level 3	8	-	-	-	-	9
Level 4	5	2	25	1	4	9

Evaluation Responses: Biology

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	1	0	5	13
1b.	The training materials contained all the information I needed to complete my assignment.	0	2	9	8
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	11	8
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	11	8
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	0	12	7
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	12	7
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	10	9
1h.	I could clearly distinguish between achievement levels.	0	2	11	6
1i.	The descriptions of achievement levels were clear to me.	0	1	11	7

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	8	11
2b.	Instructions provided by the facilitators.	0	0	7	12
2c.	Description of achievement level descriptors.	0	1	7	11

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	3	15
3b.	Practicing the item mapping process	0	6	11
3c.	Training materials	0	6	13
3d.	Table discussions	0	0	19
3e.	Large group discussions	0	6	13

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	8	11
4b.	Your perception of the difficulty of the items	0	3	16
4c.	Your experiences with students	0	2	17
4d.	Table discussions	1	1	17
4e.	Large group discussions	1	7	11
4f.	Agreement feedback data	0	7	12
4g.	Impact data	0	5	14

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	0	18
6b.	Scoring the assessment	0	0	18
6c.	Training on the item mapping process	0	0	18
6d.	Table discussions on feedback	0	1	17
6e.	Group discussions on feedback	0	1	17

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	2	14	2

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	0	7	12

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	5	14

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	0	7	7	3

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	7	5	5	1	4	6
Level 3	9	4	17	-	-	6
Level 4	8	-	-	4	10	7

Appendix J

Evaluation Responses: English II

1. Please read each of the following statements carefully. Place an X in <u>one</u> box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	3	14
1b.	The training materials contained all the information I needed to complete my assignment.	0	0	7	10
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	0	7	10
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	3	14
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	1	7	9
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	0	6	11
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	7	10
1h.	I could clearly distinguish between achievement levels.	0	1	8	8
1i.	The descriptions of achievement levels were clear to me.	0	0	9	8

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	9	8
2b.	Instructions provided by the facilitators.	0	0	7	10
2c.	Description of achievement level descriptors.	0	0	5	12

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	9	4	4
3b.	Practicing the item mapping process	4	7	6
3c.	Training materials	0	5	12
3d.	Table discussions	0	1	16
3e.	Large group discussions	0	2	15

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	0	3	14
4b.	Your perception of the difficulty of the items	0	0	17
4c.	Your experiences with students	2	5	10
4d.	Table discussions	0	4	13
4e.	Large group discussions	1	7	9
4f.	Agreement feedback data	0	6	11
4g.	Impact data	0	7	10

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	4	2	11
6b.	Scoring the assessment	1	2	14
6c.	Training on the item mapping process	2	2	13
6d.	Table discussions on feedback	0	1	16
6e.	Group discussions on feedback	3	2	12

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	0	0	13	4

Appendix J

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	2	0	3	12

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	2	0	3	12

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	1	0	9	7

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	4	-	-	-	-	13
Level 3	4	-	-	-	-	13
Level 4	4	1	14	-	-	12

Evaluation Responses: Mathematics I

1. Please read each of the following statements carefully. Place an X in one box for each statement to indicate the degree to which you agree with each statement.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
1a.	I understood the purpose of this standard setting workshop.	0	0	8	13
1b.	The training materials contained all the information I needed to complete my assignment.	0	2	8	11
1c.	The training on the item mapping process gave me the information I needed to complete my assignment.	0	1	11	9
1d.	The training on the content standards gave me the information I needed to complete my assignment.	0	0	13	8
1e.	The training on the achievement level descriptors gave me the information I needed to complete my assignment.	0	4	12	4
1f.	The feedback on cut scores gave me the information I needed to complete my assignment.	0	1	11	9
1g.	The feedback on impact data gave me the information I needed to complete my assignment.	0	0	10	10
1h.	I could clearly distinguish between achievement levels.	1	6	11	3
1i.	The descriptions of achievement levels were clear to me.	0	6	12	3

2. Please rate the clarity of the following materials used in the standard setting process.					
Item	**Question**	**Very Unclear**	**Somewhat Unclear**	**Somewhat Clear**	**Very Clear**
2a.	Instructions provided in the training materials.	0	0	11	10
2b.	Instructions provided by the facilitators.	0	0	10	11
2c.	Description of achievement level descriptors.	0	3	13	4

Appendix J

3. Please rate the usefulness of the following materials or procedures in completing the standard setting process.				
Item	**Question**	**Not at all useful**	**Somewhat useful**	**Very useful**
3a.	Taking the assessment prior to standard setting	0	2	19
3b.	Practicing the item mapping process	3	7	11
3c.	Training materials	0	7	14
3d.	Table discussions	0	5	16
3e.	Large group discussions	2	7	12

4. How important was each of the following factors in placing your bookmark?				
Item	**Question**	**Not important**	**Somewhat important**	**Very important**
4a.	The description of achievement level descriptors	2	4	15
4b.	Your perception of the difficulty of the items	0	4	17
4c.	Your experiences with students	1	3	17
4d.	Table discussions	0	10	11
4e.	Large group discussions	3	10	8
4f.	Agreement feedback data	1	10	10
4g.	Impact data	0	4	17

6. How appropriate was the amount of time you were given to complete the different components of the standard setting process?				
Item	**Question**	**Too much**	**Too little**	**About Right**
6a.	Taking the assessment	0	18	3
6b.	Scoring the assessment	1	10	10
6c.	Training on the item mapping process	0	5	16
6d.	Table discussions on feedback	0	6	15
6e.	Group discussions on feedback	4	4	13

7. Please rate the extent to which you agree or disagree that the ALDs are aligned with the final recommended page number cuts.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
7a.	Do the page number cuts align to the ALDs?	1	6	13	1

8. Please rate the extent to which you agree or disagree that you were able to provide your independent cut score judgments free from any undue influence, such as another judge, facilitator, or state department personnel.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
8a.	Were you able to provide independent judgments?	0	1	4	16

9. Please rate the extent to which you agree or disagree that you were able to provide your input into discussions that occurred throughout the standard setting process, such as during discussions of ALDs, threshold descriptors, and rounds of feedback.					
Item	**Question**	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
9a.	Were you able to provide input to discussion?	0	0	8	13

10. Please rate how comfortable you are with the final cut scores.					
Item	**Question**	**Very Uncomfortable**	**Somewhat Uncomfortable**	**Somewhat Comfortable**	**Very Comfortable**
10a.	How comfortable are you with the final cut scores?	2	6	9	3

Achievement Level Cut	Comfortable	Move Before	Average # of pages	Move After	Average # of Pages	No Response
Level 2	5	5	4	3	7	8
Level 3	2	8	8	3	15	8
Level 4	4	6	9	3	27	8

Appendix K: Answers to Evaluation Survey Free Response Questions

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
ELA 3	Impact Data The CCS and item maps were key "Just barely indicators - standards were basis of decision ACT - research and practice behind it Committee discussion - saw different perspectives" We each def. needed our own copy of the CCSS(per grade level) for each section: L, RL, RI… It was great to cross reference with our "just barely" document. I felt using the standards to write the "just barely" descriptors were very influential in my decision. I feel coming up with our "just barely" items for each level was useful. Just barely descriptions. Helped the item mapping process in an efficient way! Yes. The "just barely" indicators as well as the content standards. After completing round 1 & 2 of 3 grade bookmarking levels, I realized the importance of having specific just barely descriptors. The "just barely" indicators along with the standards were especially influential in the process. The "barely" indicators established non-negotiable minimal performance levels while the standards provide real (level of) proficiency indicators. All discussions - they were influential and helpful in gaining perspective from different people and groups. Seeing external data and impact data in the process were helpful in completing the process. Table Discussions were the most important. Impact data, teacher data, discussion with facilitator (she was AWESOME) and group discussions. Impact data - general information on demographics helped to clear vague questions about cut scores Group feedback data, impact data, ACT Explore
ELA 4	CCSS- personal copies to reference as needed. Content Standards, Just barely indicators, the stories to go back to read in contact. The impact data and the just barely standards were influential in the placement of my bookmarks. Achievement level descriptors were useful. The standards were especially influential. Just barely descriptors, p-values, common core Impact data - it "forced" me to critically examine my cut score to insure their accuracy. Impact data, teacher survey Table discussions were especially important. The facilitator, Tracey Hembry, was great! Table discussions were influential in the placement of the bookmark. The "just barely" descriptors were especially useful because they reflected the thinking and knowledge of the group relative to the standards. Yes, Unpacking documents from CCSS

Appendix K

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	Discussion & having common core standards in front of us. "-Standards were the most important factor. -teacher experience was important -ACT Explore- good data to have " OIB, student reading content, ALD's, just barely, level descriptions
ELA 5	Impact data alongside impact data demographics Table discussions were more influential. It was interesting to view the impact feedback prior to going into round 3. It mode you re-examine your "thinking processes to ensure accuracy of your cut scores. Copy of the standards - constantly referring back to them as a way of determining what CCSS states students SHOULD be doing! The p-values were very useful as well as information about where it was located within the common core. I also think that discussing what the various levels "should" be able to do based on the common core was very useful. Having table discussions after rounds and feedback were very important when I proceeded to the next round. The impact data and the just barely standards were influential on my placement of bookmarks. The discussions at the table regarding "just barely" was crucial to the process. The "just barely" benchmarks were especially influential in that they represented the thinking and insight of the group relative to the standards. All of them at some point helped shape my recommendation. The table discussions were influential in the placement of the bookmark. Discussion and having the standards to look at were the most helpful. Achievement level descriptors and the standards were important. CCSS Standards and unpacking documents Just barely - key indicators of what to look for. Standards. The actual stories - to read back for clarification of what was asked. Standards - I based my bookmarks on these. ACT scores good info to consider. Just barely descriptions, ALD's, OIB, student reading packet
ELA 6	Writing the behavior descriptors should have been done right after the "just barely" descriptors or simultaneous so we could break them cognitive tasks. Behavioral descriptors - focused on difficulty of task @ hand really looked @ while each task fell on :just barely". Feedback from previous rounds. Seeing how many students got questions correct p-score. ALD's - I looked at the verbs that the common core says students should be able to do. They kept the item analysis objective. Creating the "barely there" skills & looking at the verbs in the ALD's; discussion in table and large group helped seeing/hearing discussions about questions and how to treat outliers. The cut scores info we created also gave a "good" standard for students to meet. Behavioral descriptors because they really delineated what students are able to do. The achievement level descriptors also gave a good "standard" for students to meet. Impact data, question achievement gaps; P-value data, reflection of achievement; KSA's, clear expectations Creating KSAs. Table discussion helped to establish baselines and scaffold

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	collaborations. The materials provided, but most useful was the content domain map and info provided on the PPT by the instructor. The ALD descriptors, I paid careful attention to the wording of the questions, answer choice - and my understanding and comfort level with my knowledge and understanding. The KSA were very important; had to take out personal bias. "Just barely" achievement level descriptors helped to locate a cut-off point the p-level report for each item showed if I was on the right track. No Write and discussing the "barely" ALD descriptors were extremely important in where I placed my cut offs. Having time to discuss questions and clarify with our table between each activity/task was extremely helpful. no They were all equally important. The ALDs and "just barely" descriptors were especially influential.
ELA 7	Writing "barely" level descriptors were very helpful. No Getting additional time to read through the test really helped. No "Just barely" statements were very helpful No P-value; text complexing awareness; help to determine what students should be able to do KSAs, table discussion helped to narrowly define bookmark placement The information provided in the item map (empirical difficulty) was helpful and influenced the placement of my booklet. Table discussions, data, review of material against standards and ALDs (including "barely there") ALD's Item map empirical difficulty; cut off scores / impact data; just barely descriptors P-values on what actually happened caused me to more carefully examine cognitive tasks of certain questions Table discussion of 2nd round Yes - p-values hand-out and table discussions about specific questions
ELA 8	setting "barely" descriptors "just barely" statements setting "barely there" no The ALDs & "just barely" descriptors KSAs were influential in determining cut offs. None very difficult for 8th - quality of selections not same as 6th & 7th item empirical data, just barely descriptors, table discussions The texts were way out of line using the verbs in the questioning connecting to standards "just barely" ALD The ALD and descriptors could not be vetted across the room
MATH 3	Table discussions - explanations & analysis of knowledge & skills to answer the ?s; "P-values" sheet; behavioral descriptors

Appendix K

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	P-values helped me have confidence in my placement. ALD|Just barely, common core stands all of these helped in determining the level lines The table discussions Taking the test + then discussing after round 1. Very helpful. Achievement levels of students The most influential were table and large group discussions because the other panelists brought in different viewpoints that clarified my thinking taking the assessment Actually taking the assessment was very helpful because we could relate our feelings and thought processes to our students Table discussions important in understanding and trying to find clear cut scores. Discussions very important enabled diff viewpoints about question difficulty to be shared and evaluated Remembering that we were placing bookmarks according to what the students "should" do versus "will" do or "can" do was especially influential in my decision. The achievement level descriptors were helpful because it helped guide my decision and maintain my focus on what a student "should" be able to do. "Just Barely" handout, Discussion w/ table group, Remembering it was how they "should" be able to perform. Past experiences with students and trying to adapt the bookmark cuts so they fit each achievement level descriptor based on common core state standards. The CCSS along with the ALD. They were influential because I looked at the progression of skills students acquire as they work towards mastery. P-values, common core standards, descriptors, feedback data The CCSS and ALDS (although I had to add my own thoughts)
Math 4	ALDs + CCSS considered use of P values. Used ALD + CCSS for vertical alignment; how should students that were performing at the EOY for 3rd progressed by the EOY 4th; what skills should they have acquired. P values helped us to see how children actually performed in NC not just our predictions. Common Core Standards. Table level discussions and Pscore's data The ALDs + content standards Table discussions experience w/ students because as teachers we can always rely on children in our classroom that we have taught Table discussion - seeing different points of view The P-values influenced my placement as well as the discussions with my table influenced my decisions. Table discussions - input from teachers at different grade levels. "Barely a 2, 3, or 4" P scores helped Going through the grade 3 tasks influenced how grade 4 were done. Discussions with table were positive influence to help understand difficulty of questions. 4th grade questions did not "feel" like they were in order of difficulty Table + large group discussions were influential to hear different points of view

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	The P-values were useful Looking at the Barely level students and what they should be able to do was helpful to me. The p Values were helpful as well when we got close to the last round.
Math 5	Both large + small group discussions Discussion with colleagues The p values and our table discussions I used a combination of the materials provided. The CCS and the descriptors were quite important. When utilizing the CCSS I consider the progression of topics and what skills students should acquire as their academic career progresses even if not on grade level. P-values helped us see exactly how kids performed + Feedback data was helpful to establish where our cuts fell Group discussions, impact data, p values, It was nice to discuss other peoples opinions and share strategies table discussions group discussions large group discussions Table + large group discussions were very influential Table discussions, understanding of content standards Group discussions, p-value, standards, and alds were helpful, along w/barely 3,4,5
Math 6	Large group discussion - provided additional perceptions for consideration. Discussion after cut 1 & 2 The training on "barely there" helped in focusing on what a lowest student in a level knows. The p scores and the item difficulty level (lowest to highest). The p scores helped me see how students actually did vs my perception. The p-values and the ordered item booklet itself. ACT data gave me a clear view of how the cut scores would be used to reflect all the students in NC. Just barely level descriptors, these were useful, however and assuming that students can all read at specified grade level makes this hard Behavioral, ALD, seeing the p-value for the test items. "Just barely" descriptors were especially influential because they made me aware of what students could "just barely" do at each level. The ALD tables that we created. The ALD assisted in placement of the bookmarks. Also the table and the whole group discussions for adjusting the bookmarks. N/A Table/large group discussion and the impact data Table and panel discussions helped clarify
Math 7	I would have like to see the variables that are (outside) the test, but affect the test we considered more Yes, "just barely" level descriptions to compare content of each question. Impact Data The impact data was especially influential. Seeing this data made me want to lower and/or increase bookmark data. The item map with empirical data, ALD, just barely descriptors, the small group discussions, helping me to make sound decisions.

Appendix K

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	The ordered item booklet itself. The p-values data. Impact data provided overall picture of the effects of our recommendations as a group. n/a Act, Teacher Surveys Impact data Impact data Just Barely' and impact data
Math 8	The p-values. The ordered item booklet itself. Taking the assessment was especially influential. I could see how the standards were being assessed + then used my knowledge of barely there descriptors to place the cut. Looking @ data + facts n/a Impact data was very influential when making the final cuts. Impact data & discussion helpful in understanding my perceptions. Impact data Yes, just barely levels Impact Data Yes impacting data, just barely sheets, ALD's. Making the cut scores for 2,3,4 The process of asking teachers (in the state) what they think scores will do vs. asking us to address what students should do. Table discussions because the EC/ESL teachers in our group were extremely helpful in reminding us to remember that "just barely" students have certain skills they still struggle with. It helped ground us as we looked over the difficulty level and where to place cuts.
Science 5	Large group conversations; familiarity of testing; review of the …should statements Yes, ALDs - thinking of how my colleagues view achievement levels of student Writing the ALDs was helpful in creating a definition of what students "should be" able to do; Impact scores were surprising & made me question if my "just barely" level 4 expectations were too high Item map content domain handouts. They expanded my view and helped inform my selections Achievement Level Descriptors The "p" value scores were helpful in placement of cut scores Info from table discussions, group discussions Referencing the ALDs during the mapping was beneficial. Asking myself "Should a just barely level - be able to answer this question." It helped me think about all students. The achievement levels helped me as well. Discussions with table groups were helpful; Impact data gave a different perspective, that was helpful, too Standards ALD's Pscores The ALDs were helpful because we were able to refer back to what we expected a child should be able to do. Impact of cut scores on outcomes for this year's results

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	Just barely descriptors - it represented group consensus on what a student SHOULD be able to do; ALDs - helped me move on past items. Ex: If it's a level 3 ALD, I know a just barely 4 can do it. The data based on teacher input and ACT Explore were very influential on my decisions about the cut points/bookmarks made. Because the data helped me to see if I was being too rigorous or providing not enough rigor
Science 8	"Just Barely" activity enabled a better ability to distinguish between achievement levels. Table discussions were also helpful. Seeing where others placed theirs. Measuring differences in the p-values as a way to make final decisions The "just barely" descriptors The content standards were helpful to understand where students should be. The ALD's helped to distinguish between levels. The thresholds were critical in order to determine exactly where the cut-off should be. The p-values helped if there was hesitation in declaring a cut-off Just barely descriptors helped identify minimum ability w/in performance level - made bookmarking decision clearer and easier to discuss; Small group discussion - "safer" conversation also we all had EC experience but having an EC teacher in our group was very valuable. Yes. The content domain, barely there, ADL, and item mapping with empirical difficulty helped me in making decisions about the cut The table discussions after we made our cuts - seeing where others were - hearing the explanations helped clarify questions All of the data items helped influence the placement of the bookmarks. The data with my knowledge of content and student behavior made for a whole picture. Our table discussions and comparisons of our reasoning was very helpful to me. We all looked at different perspectives which helped to give a broader view. p-value Distinguishing what a "just barely" student should know No one material overpowered the others but it was very helpful to see the data after round 1 to clarify and paint a broader picture The ALDs and "Barely There" The materials with p-values + scale scores were most helpful because I could see how difficult the items were intended to be + how difficult students actually found them
Biology	Content Standard, ALD's, JBL's. Mist be content based aligned to achievement level descriptors and looking at a base level on each achievement ALDs- determination of what students "should know" at each score level border line The number of students making each level - Influential number of students that could not make level 3 The essential standards and breaking them into achievement level descriptors because it helped look at a question where I wasn't sure in order to decide The item map with empirical data 3 cuts; view exam; vocabulary review Teacher survey - how low the cuts were; impact data - the reality of where

Appendix K

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
	we placed our cuts ALD's were helpful in the placement of the bookmarks along with table discussions the p scores, impact data One group created ALDs that could not be used on individual questions. This was not addressed so we had to make decisions on that level with no ALDs. I thought that the "Just Barely" explanation and the yes, tes, no technique was useful. Table discussions of "just barely" definition and looking at other table standard. Table discussions / experience with students Table discussions to see our session 3 impact focus on verbs (skills) not content, by end of process b/c early rounds focused on content not skills. We had committee discussion that was incredible.
Mathematics I	When you look at our minimum level descriptions many teachers were much higher on their expectations with their cut off scores. Many felt that just because their students could guess and check to find the correct answer instead of using algebra methods they should move past the question. The ALD's we created along with the "just barely's". discussions within groups & p-values; helped to distinguish what students should be able to do along with how they actually did. ALD's; Just barely there for some of the strands Standards and "Key Words"; previous experience with students (both of high and low abilities); previous testing knowledge Impact data of actual 2012-13 was eye-opening The data with percentages of items students answered correctly. It helped me decide what questions students at a certain achievement level were able to answer Impact Data The content standards and the p-value were most influential in round 3 Yes, the impact data impacted me lowering my standards 1-4 pages per level! Table scores and Impact scores. After the first round, I understood better how to bookmark. ALD's and item difficulty Impact data and the actual test because they helped me to understand where to put my cuts. Achievement level descriptors were helpful working with the ordered EOC items Collaboration with the table and the feedback with the large group Yes. Just barely descriptions - used to determine if a student should or could achieve the standard. P values- gave perspective to compare just barely and actually. Impact data- gave perspective of the two above mentioned considerations and the actual scores students made along with subgroup impact. The were all important. Impact data- Very! The large group discussions were great. The impact data was eye opening. Past experience assisted in understanding of "Should more aftern than not".

5. Were any materials or procedures especially influential in your placement of the bookmark? If so, which ones? In what ways were they especially influential?	
English II	Understanding standards on CC & analyzing levels for ALD. Hands-on work with standards & understanding how they align are both good strategies All procedures collectively helped me make decisions The achievement level descriptors served as me guide; however, table and group discussions provoked me to re-evaluate my initial cut levels, which dramatically changed from round 1 to round 2. Our table discussions were the most influential The "barely there" descriptors helped narrow down the differences in achievement levels. Looking at standards- Some people didn't know the standards Creating the "just barely" marks was an especially influential part of bookmarking. This helped me distinguish the difference between what students "can" do verses what they "should" be able to do. The comm. Level feed backs, the "just barely" level sheet, item map "Just Barely" Levels My group's discussions & aligning specifull with standards and benchmarks for achievement levels "Barely There" descriptions Just barely descriptors (use these descriptions to evaluate what students should be able to do in each level.) feedback- impact of cuts The "Item Map Empirical Difficulty" was influential. The p-values given helped to validate my selection of cut off scores after I had placed the scores on my own. Group discussions and impact data were both helpful in providing feedback to help with my decisions.

Appendix K

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
ELA 3	All instructions were very clear. The facilitator was very precise with adhering to the schedule. There should be a description of the process provided before training begins. It would help make questions more relevant in the beginning. More time to do develop/write the Just Barely Indicators Everything I have experienced so far is great. Our presenter, Tracy Hembry, is very helpful, smart and knows everything to the "T". She is on point and one of the best presenters I have worked with. Very professional. Our facilitator, Tracy, was AMAZING at keeping us on track, staying objective, and sharing info as needed. My only recom… would be to emphasize the imp. Of constantly referencing the CCSS - by ensuring everyone had their own copy. Somehow maybe the use of Pearson or DPI secured technology only giving access to certain websites correlated to the standard setting procedure More examples if possible from other standard setting trainings such as ALD's. This has been a very beneficial process in understanding how standards are set. na Completing grade 3 was challenging because it was a new experience however after going though it was interesting and informative. Each step if the process let to better understanding. I have thoroughly enjoyed this process. As an educator it has given me a "renewed" sense of teaching. It has probably been one of the best staff developments for me. :) Working on an 82 item test to provide cut scores in a daunting task. It would be more workable to provide cut scores/benchmarks for a "normal" EOG test containing 50-to-55 questions. not sure at this moment
ELA 4	Tracey was WONDERFUL as our facilitator. Our group was very respectful to each other and the process was very smooth. It was an amazing learning experience! Thank You!!! None at this time. This process was a great experience. I am thankful for the knowledge I learned. Thanks You!! "-Pease provide the unpacking documents to stat the process of creating the academic levels and just barely docs -Please develop a letter or brochure for stakeholders to understand this process and how the changes in curriculum affect the standard setting process. -Our facilitator Tracy was Excellent!!!" To include the unpacking standards for more details "-Provide a copy of the standards for each participant. -More time to develop the ALD's." Please include all aspects of the new common core on end-of-grade tests including CONVENTIONS, which were not tested on NC EOG tests, yet are tested on other common core state test. I was impressed by the way facilitator handled any issues that arose.

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	I enjoyed the process for standard setting. Have materials for every participant during group discussions. Some type of iPad or laptop per table to allow access to online documents. Could be secured or locked to not go to other sites. Secure Technology for more documentation(unpacting documents (crosswalk))
	I see the fact that all of the new required common core aspects were NOT tested, such as conventions, when these aspects were taught and are being tested in other (common core) states. In addition, input and impact from the common core project base (3) is not addressed anywhere in the EOG testing process. I find this problematic in the whole picture of the NC (students/and) educational system. Providing an electronic device @ the table so we could pull up the unpacking document and the CCS. That each participant have & consistently reference the CCSS (their own copy) as well as having the participant support his/her reasoning while referencing the standards (since that is what it being assessed). This helps eliminate to some degree personal bias. Because we are teachers we are bound to get off track and talk about the policy and politics of teaching. Our facilitator did work to keep us on track, but perhaps it could be emphasized that those types of discussions are not the purpose of the committee. The unpacking standards should be made available to panelist. The standards are very detailed and give clearer expectations. More time to take the assessment. Conversations with DPI at the end of last round/last grade to discuss the process after we leave. It would be helpful if there were enough materials i.e. standards for each participant, rather than a few to be shared. These were provided by DPI, I believe. Instead of just thinking "should" a student be able to correctly answer a questions, "to what extent" should a child be able to answer certain type questions. I enjoyed the process for standard setting. The only thing I would change is some of the off topic discussions that do not relate to standard setting. I feel this needs to be conducted and/or reviewed next year, and potentially the next in order to make changes, review data, and/or revisit standards in regards to establishing district level training and professional development. Well done!! None at this time. Tracy Hembry was a very great presenter. The Rizzo Center was great!! Thank you!! It would be good to have the unpacking documents available. Use of some secured technology for crosswalk and unpacking documents. Also more discussion with DPI in sessions! Not all can go to the vertical articulation meeting!

Appendix K

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
ELA 5	ALD "just barely" descriptors need more time - even 2 days - and vetted prior to this work's process. They were inaccurate because we didn't have enough time. Was good! The first round was very stressful, but now I have a better grasp. I think teachers need to understand that the process must be totally objective. As teachers, we advocate for our students - That is not the purpose of this process. The process was very interesting wish we had more access to approve other groups ALD's/ A little more clear trains on the bookmark process. I would possibly switch the order we did the behavior descriptors and ALDs. I would also devote more time to ALD development and cut score creation. Know how the documents will be used before had helps. An educator as presenter would be helpful. Smaller groups - of maybe 3-4 Mode examples; clear directions, concise; model with doc camera Smaller groups for discussion prior to large group discussions. An extra day to set the ALD indicators. Ensure that each panelist is very clear about the overall rating process, criteria, vocabulary and expectations. Process became clearer (as I participated more.) the more I interacted with the ALDs and actual test. Less discussion as a whole-group between steps. N/A N/A As soon as the people completed their tests they immediately began moving around and talking. It would be helpful if they would leave the room to have a conversation while others are still working. It is also distracting for anyone to talk during the cut scores evaluation. I spoke to Mark about this issue. He did address this issue immediately. Just give more time to read the questions and think about the standards. I felt a little rushed. Also, as other participants finished they would have conversations which made it difficult to concentrate.

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
ELA 6	Spending more time reviewing and revising the "barely" maybe descriptors. Spend more time previewing the questions/passages We need to discuss the "barely there" descriptors as a larger group to tweak them None Nothing More time/discussion on "just barely" statements, less on behavioral item descriptions. none Color coded paper, smaller groups Color code grade levels None. I am getting more comfortable with the process. more large group time to develop ALD's I am much more comfortable with the process now - participants were also quiet as we worked. N/A ensure teachers read the text / familiarize 1st before leveling @ questions Give each table a computer to use to type info into.
ELA 7	Allow more time to preview the test items. Allow time for the entire group to agree on the "barely" descriptors. none NA colored paper for grade levels None This was great - quality of selections nee improvement set room expectations concerning talking/respect; previous suggestions from 6th & 7th grade more time on ALDs More time to vet ALDs and descriptors
ELA 8	Allow more time to preview the test items. Allow time for the entire group to agree on the "barely" descriptors. none NA colored paper for grade levels None This was great - quality of selections nee improvement set room expectations concerning talking/respect; previous suggestions from 6th & 7th grade more time on ALDs More time to vet ALDs and descriptors
Math 3	consider revising the process for "typing in info" wasted time It may be helpful to give some information in advance Better trained Pearson facilitators who are able to explain the process in detail with examples It would have helped to have more time with instruction slides for visual

Appendix K

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	reference while working on cut scores I would suggest identifying when each topic was completed by all panelists. If everyone finishes earlier than the agenda, take a short break sooner or move on to the next topic. Since this is a new experience, I feel honored to be here and basically am going with the flow. I have no suggestions at this time. I feel that we had all necessary materials to allow progression at a steady pace. This process I would like to see more time to discuss with larger group to hear more reasons why some cut scores were chosen. I'm not sure if I have any suggestions. I thought the process went smoothly, once past the initial learning stage. I think the materials and level of training was outstanding; however, I would have liked to have a copy of the revised blooms to periodically refer to for writing ALDs. It was difficult to do the achievement level descriptors on the first day. I felt like we were "spinning our wheels". The three tables were not doing the same thing. I think the way this was setup was impactful, yet, I think the state needs to keep in mind that they are going to see this "dip" in scores + don't blame teachers with punishment on standard 6 on our evaluation or punish the students by making them attend summer school + placing them in remedial classrooms. It's not fair to do that to teachers and students especially within these first couple of years that we're infusing this new curriculum. Why didn't we start with looking at the tests to see examples of the standards? The whole process seemed backwards when we began.
Math 4	The test items fluctuated in skill difficulty + made it very hard to decide a confident cut line. more information prior to meeting Allow a person from the state board to be in attendance + hear our concerns The levels between were not clearly defined. The level of difficulty in the test made it very difficult to determine the cut score for level 3 I know we need high expectations, but students need not be punished due to the lack of training/materials that teachers have available to teach the common core correctly. There needs to be like a 5 year grace period or window for teachers to learn + for students to learn how to think this way. No suggestion, just observation: It was more difficult to place the 1/2 bookmark due to the "mixed-up" levels of items. Student performance was wildly inconsistent. N/A On the fourth grade assessment there were many easier problems between the cut levels Type what is (leader) provided on paper while working on next task. While waiting for typed info too much sidebars going on. Just please keep the students in mind when making cuts. Most of the students don't have a fair chance looking at some of these questions. It seems that they are setting some of our students up to fail.

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
Math 5	Participants had varying perceptions of what a level 1,2,3,4, student is. This affected pcsi having of scores. Needed clearer guidance on setting ALDs + behaviors Please keep our students in mind when finalizing the cuts I am CONCERNED with cut scores that fail 51% of all NC students in grades 3, 4, & 5. I am all about setting standards high and this will not affect the my current standard of excellent, but I am also realistic these kids need time to adjust to the common core. If our cut offs remain at this level, students with so much potential will be BEAT DOWN + good teachers will either quit or be fired! We must consider realistic cuts based on a students ability at a given age and not all children are created equal. There needs to be a grace period to help teachers and students with the results and impact data. Teachers need more training in the common core and students are suffering due to the lack of knowledge by their teachers. more information in the equating process Our facilitator, Jenna, was absolutely correct in saying on Day 1, we would be confused + not sure about the process. But by the end, it all made sense! Seeing the test items before setting the threshold descriptions would help us get more specific - think things through exactly what we meant Encourage more group collaboration with prompts to guide the discussion for grade 3. We had our best whole group discussion for grade 5.
Math 6	More direction/examples should be provided prior to Day 1 activity. It was unclear & a lot of time was wasted discussing what/how we should proceed as a group Rotate groups for small group Have a table in which panelists can mark y y y n n y for each round so it is easier to go back and see where to place a bookmark at each round. Some of the conversations were driven by some outspoken teachers that really do not have a lot of grade level content knowledge. You must be an expert in the content in order to opine about cut levels, I believe Create the "just barely level" descriptors; isolation from table members when making 1st, 2nd, and 3rd round cut scores; Standard 50 question EOG; Remove knowledge of statistical data from the order of tested materials (i.e. order from "easiest to hardest"; Bring in a "student panel" to test based on previous assessment score 1,2,3,4; Panelists evaluate student scores after setting cut scores. Give some information to read before the training. Like key vocabulary terms or something to do with standard setting process. Starting with the student barely on grade level (just barely level 3) would have made computing the "just barely" descriptors for 2 and 4 easier. If I have a picture of a student barely on grade level, I could easily identify a level 2 or level 4 student. n/a Provide the impact data after round 1

Appendix K

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
Math 7	Outside variables must be considered + teachers responses from April are based on what they think students can do not should do. Along with the common core standards have a copy of the unpack documents Look at 6th Grade Evaluation Next time give ranges for us to go by I think some meeting rules and protocols should be established so a few vocal people do not get everyone off task. All of the teachers should have content expertise - that was not the case. 4 Provide one full day to go through the entire process as a practice. Much more prepared to do 7th grade than 6th. n/a Show the impact data after round 1 None I would have liked to see more student % in relation to our cut scores. Changing a cut only a few problems can drastically change a percent.
Math 8	I would suggest screening teachers based on content knowledge mastery. I was not comfortable that teachers had enough content knowledge. Our facilitator was great! Be sure all panelists complete all assessments. Question #4 asked about factors used in placing bookmarks however p-values were not listed BUT 2 panelists at my table used p-values to place bookmarks for grades 7 + 8 + did not complete assessment. change table dynamics Since practically everyone disagreed with the order of items in the OID ("easiest to most difficult"), it would have been very helpful to hear a more detailed description of the methodology used to rank items, rather than just accept the stipulation on faith. Having access to unpacking documents would have aided the committee in creating detailed academic behavior descriptors. None Provide the impact data after round 1 Have the unpack documents along with the broad description of common core Give standard scores to go by for each cut
Science 5	I would have liked the group to review and rewrite the ADL's after the second round and before the third round so that the definitions drove the cut score more. The impact data is tough. You treated us well and as professionals. When data was given, I would have liked some wait time before discussion started to reflect. Thank you for encouraging us to have differing opinions and the facilitator handled heated differing opinions well - always referring back to the standards, framework, and shoulds...ALD rigor Streamlined instructions or instructions that provide more clarity of the ultimate goal. More details about the process behind how the statistical analysis is complete, or the "why" behind an activity; ALDs are a very rough draft, more time is needed to work on those, or a more detailed framework to work from; How our recommendations play a role in the final decisions

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	Add an additional 1 day. None I would like to know @ the test writers. If teachers have difficulty interpreting a question which will also affect the cut score, how can students be expected to answer that same question? Provide panelists with a copy of unpacked standards to reference to see if the descriptors & cut scores factor in the expected "depth" of the curriculum. A stronger facilitator that can keep the groups conversations and reactions on topic. There were many discussions on the way groups thought that were very nitpicky. Very nice facility for conference. Friendly helpful staff. I learned a lot and have a greater understanding of the testing process. No suggestions - everyone was professional, took a lot of time to discuss and decide on cuts, the facilitators / DPI / Pearson personnel were all very knowledgeable + helpful. I think more time could have been spent during discussion/activity times rather than exhaustive clarification of instruction / expectation. Some tasks were difficult to start promptly due to confusion of objective with unresolved answers. I believe it would be very helpful to be able to review and access NCDPI unpacking documents. I also feel that directions and instructions were very unclear or they did not exist. Much of our time that truly needed to be used for the activity and assignment was wasted on having to ask for clarification multiple times. Our facilitator had a difficult time answering our questions and clarifying our misconceptions. Our facilitator had a difficult time communicating the purpose of individual assignments. It appears that he is often unsure of how to relate and understand our concerns as teachers. Without the supplementary materials our directions for activities were very unclear and disorganized. I believe that the process of taking a practice test was helpful, but would have been more effective to complete prior to reviewing the actual test. Please consider facilitators that are able to move the group through the process successfully. Many of us were concerned that there was too little time to work through the process successfully and develop an acceptable product. The entire process for our committee was very disorganized, unclear, and ineffective. The facilities and staff were fantastic and our facilitator was personable and was very committed to our success, he was just not effective with this particular process. Handouts on marzano cognitive processes so all using same language; facilitator struggled with responding to participant questions wasting time; some processes not ever clear - behavior descriptors or extended time to be clear cut score placements. When writing ALD and feedback not enough time given to adequately discuss and reflect to clarify levels - felt very rushed - again common terms would have been helpful. Behavioral expectations - not sure the purpose; If the ALDs are to be guiding documents, I felt we needed more time to develop them, and unpacked documents to help fill in content bits OR ALDs could have been provided?? Maybe for a level 3??

Appendix K

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	My group have a hard time understanding where to consider the cut points for "just barely" descriptors, therefore there needs to be more of a concise / explicit instruction for the task. Also the time to complete the ALDs should be extended.
Science 8	Allow more time. The entire process seemed extremely rushed. More time and more specific instruction needs to be allotted to the ALD writing process. More time for ALD development Provide unpacked standards as well as requiring "Just barely" descriptors in every essential standards instead of allowing teachers to decide. Overall, teachers need more time to create the ALD's and thresholds. More time for Behavioral ALD's and "Barely" levels more time spent on just barely descriptors I felt that setting the ADL was rushed. We should be given ample time to differentiate each level. I was also concerned about how these cuts will affect the SWD LTD and ESL groups in relation to other subgroups The ADLs need more time than was allotted for them. I do not have suggestions. I realize that in a perfect world we would have more time to write the ALD's. Given the time and budget constraints, this was a good process. Did have one person in the large group discussions who seemed to dominate the conversations. This seemed to make the entire process more laborious. I realize that this happens often, just wanted to note that it was an issue. Make it three days we felt rushed the first day in creating the ALDs More time should be allowed for creating the ALD's and "Just barely" standards. I feel this part alone should be at least one whole day Better time management - facilitator read and reread slides to us multiple times at a slow pace. Time would have been better spent creating ADL's. We went 45 minutes past our scheduled time on the 1st day. To be more effective another day should be budgeted for ADL creation alone. More resources readily available Clearer instructions to and from the facilitators More time to work on the ALDs and mapping We need more time for writing ADLs, barely there, and behavioral statements.
Biology	A discussion that the recommendations provided would be taken into serious consideration (set standards then work to reach them) regardless of national perception or policy or teacher. Otherwise I thought the process was very evaluating organized and thoughtful. Career and college ready are very discrete/different levels, this is a challenge in establishing cut scores. 2 exams - may be a better assessment of readiness. The training was very informative. I think the topic areas were clear, however some of the actual test questions were poorly written. Include information on calculation of percent scores less test questions; one complete test - not part of each It would have been helpful to have the unpacking documents along with the essential standards and clarifying objectives. I applaud the bookmark process as it related actual items to the cut

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	scores. I did question alignment of test items to content (several questions). The process was eye-opening so that we see the transparency of standard setting. Using impact data from the most recent test was questioned as certain districts instructed students that the assessment did not count therefore data is not valid. Larger tables for small group size 3 tables doing , sometimes, 3 different things can be problematic. Some tables talked too much during the cuts (rounds) so that many people were not objective. Many members of one table had the same answers. The reality of this is some of the items on the OIB were misplaced due to lack of coverage on the Essential Standards as well as questions that are incorrectly worded. Too little time with writing ALD's. 1. Spent more time describing ALD's om ,pre detail; 2. gain consensus on ALD's b/w all groups/tables; 3. more valid data with regard to test scores of students (in many counties the EOC did not count for students so scores are skewed); 4. a few of the questions on the OID were not valid; 4. One of the tables made each round a discussion based activity rather then individually Have more data available and avoid having different groups write different descriptors. While I know division of labor is helpful it leads to a lack of consistency. In regards to data I feel it would be beneficial to see impact data on each tables data to allow a more informed position. Additionally the impact data was flawed due to the fact that many districts, especially large districts, gave this test to students with the test not counting against the student in any form? Some individuals need to be more open-minded. There were some who never modified their position regardless of data presented or points made during discussions. "Note on #6: I thought it was on mark. I think that the process needs to be revisited after the test has been given several times. I feel that how the test was administered affected the teacher survey data. I feel that all state testing should administered the same ""counted"" the same and ""advertized"" to parents and students the same." We could have used the "unpacked" standards better than the "packed". I really find it very interesting. I would say: invite more ESL/EOC teachers to join each different groups of discussions. I think it was very hard to remove oneself from the equation and put aside personal bias so I think that having some way to do that would be helpful. Increase prep info in email
Math I	My major problem is with the test. It is at such a high level there are no questions to assess if a child understands a concept on what we would call a level 1 or level 2. There were practically no questions at all that your level 1 or level 2 child could answer for sure. You need to add more basic questions to allow a progression of seeing if a child can factor a polynomial in the form ax^2+bx+c, add, subtract, or multiply a polynomial, graph a line, solve a basic system of equations, find the vertex of a quadratic function, find the mid point and distance, etc. We can't honestly assess where they are on a skill level if there are no basic

Appendix K

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	questions. Almost all of the questions were multistep word problems. They are not appropriate for the average child. After seeing that a level 2 cut off on page 9 put 51% of our students at a level 1, we need to look at the test also. I think more time needed to be spent on creating the ALD's and the just barelys. These were so important in selecting the cut scores and I feel like we flew though this part. Also, instead of the 3 groups doing 3 different things, I believe that it would have been more beneficial to have the groups complete the same tasks, then share & come to a common consensus. More time in general (one extra day?) would have been very nice. More time to produce ALD's and "just barely" charts. (weren't as useful as I would have liked; not specific enough to help determine cut scores.) We could have used more time after we began the cut score process to go back and adjust the ALD's and "barely there" charts. More information on the next steps and what actually happens with our data. More testing data from the entire year; table leaders who are classroom teachers; less "Down" time; more examples of what defines a good definition Impact data from actual scores cause cut scores to lower dramatically. Allow more time to take 90-item assessment I would use impact data more frequently to educate participants on how the cuts affect the overall population. This way, we can effectively set goals/reasonable expectation for ALL students Additional time to take the assessment. Being able to work the problems helps determine how the ALDs apply. none I would give time to adjust ALD. Less discussion, more emphasis on what the standard says for a student to do. Nest time, 3 days will be better. First day was rushed doing ALDs. develop more specific examples in the ALD's to help better guide the process and decision making Show impact data earlier, more specific w/ ALD's More Time! Particularly to develop ALD's. Everything seemed very rushed. more time for "barely" ALDs and ALDs For our process more time needed to process cut score collaboration. For the test itself- please please field test the questions more for a better evaluation of validity and reasonable questions for student performance. More time to work problems. Work problems prior to setting ALD for a short time then work problems after ALD setting, this would help in determining just barely descriptors. It would be great to have more time for discussion in groups. It would help if we would have seen the impact data at the end of round 1, then again at the end of round two. Very nice facilitator.
English II	Practice assessment needs to be with own grade level. All CC Standards provided to all participants (only 6 got lang & writing standards)

14. What suggestions do you have to improve the standard setting process and the training? (Please use the reverse side as necessary.)	
	proactive with our own grade items There should be a 2nd round of ALD writing after the 1st round (and discussion) at bookmark setting. The role of chance/guessing in producing students' cal final scores was never discussed but is important. Taking the assessment prior to standard setting would have been more helpful if we could have practiced with 10th grade assessments instead of 5th grade. There was a lot of confusion. I was glad that we had a variety of participants, but some of them know very little about the common core standards. Perhaps people from outside the content area need extra training. Participants should be able to rate the difficulty of passages in addition to questions. There is a clear disconnect between what students should be able to answer & read. Instructions & agendas were not sufficiently precise or accurate (e.g., no indication where registration or meeting at the Rizzo campus were to take place; no announcement of the breakfasts on the agenda or materials. Written directions for all activities for those who work better reading. Level of passages should be rated; standing table to use as needed I would like to see a different approach to the presentation of ALDs. We had to struggle through the development of the ALDs to understand the process. Some more time could have been used for the achievement level setting. Maybe passages need to be rated as well based on the standards. Allow passages to be included in the discussions. Passages should be leveled as well. more time allocation Have NCDPI person to answer Q's in room during test review More time to read the passages would be helpful. Provide a test booklet in order of students performance p-value.

Appendix L: Vertical Articulation Readiness Survey

Panelist ID: _____

Please circle your response to the following questions.

Readiness for Vertical Articulation		
I understand the vertical articulation recommendation task.	**No**	**Yes**
I understand that I am to consider the impact associated with the Round 3 recommendations, the external reference data, the limitations of the range of the Round 3 recommendations, and today's discussions when making my ratings.	**No**	**Yes**
I am ready to begin the vertical articulation recommendation task.	**No**	**Yes**

Appendix M: Vertical Articulation Recording Form

Mathematics EOG

Panelist ID: _____

Instructions
Your task is to recommend the cut scores required in order to be classified into each achievement level for the North Carolina EOC and EOG tests. Record your recommended cut scores for each grade, subject, and cut point in the following tables. As a reminder, the values that you are recording in the following tables are page numbers.

Achievement Level	Mathematics Grade					
	3	4	5	6	7	8
Level 2						
Level 3						
Level 4						

Appendix M

English Language Arts/Reading EOG

Panelist ID: _____

Instructions
Your task is to recommend the cut scores required in order to be classified into each achievement level for the North Carolina EOC and EOG tests. Record your recommended cut scores for each grade, subject, and cut point in the following tables. As a reminder, the values that you are recording in the following tables are page numbers.

Achievement Level	English Language Arts/Reading Grade					
	3	4	5	6	7	8
Level 2						
Level 3						
Level 4						

Science 5 & 8 EOG

Panelist ID: _____

Instructions
Your task is to recommend the cut scores required in order to be classified into each achievement level for the North Carolina EOC and EOG tests. Record your recommended cut scores for each grade, subject, and cut point in the following tables. As a reminder, the values that you are recording in the following tables are page numbers.

Achievement Level	Science Grade	
	5	8
Level 2		
Level 3		
Level 4		

Appendix M

End-of-Course

Panelist ID: _____

Instructions
Your task is to recommend the cut scores required in order to be classified into each achievement level for the North Carolina EOC and EOG tests. Record your recommended cut scores for each grade, subject, and cut point in the following tables. As a reminder, the values that you are recording in the following tables are page numbers.

Achievement Level	End-of-Course Subject		
	Biology	Mathematics I	English II
Level 2			
Level 3			
Level 4			

Appendix N: Vertical Articulation Evaluation Survey

1. To what extent was the length of this meeting appropriate for completing the vertical articulation?

Too Little Time		About Right		Too Much Time
1	2	3	4	5

2. To what extent do you believe the **Round 3** impact accurately reflected the percentage of students that **should be** classified in each level across subject areas?

Not at all Accurate		Somewhat Accurate		Extremely Accurate
1	2	3	4	5

3. What was your level of comfort with the vertical articulation impact rating task?

Not at all Comfortable		Somewhat Comfortable		Extremely Comfortable
1	2	3	4	5

4. How comfortable are you with the final group-level impact recommendations?

Not at all Comfortable		Somewhat Comfortable		Extremely Comfortable
1	2	3	4	5

5. How influential were the following factors in determining your impact recommendations?

	Not at all Influential		Somewhat Influential		Very Influential
A. The Round 3 impact data	1	2	3	4	5
B. The external reference data (teacher survey, Explore linking study)	1	2	3	4	5
C. Other panelists' comments/ Group Discussion	1	2	3	4	5
D. Your professional experience	1	2	3	4	5

6. Please use the back of this page to provide any additional comments you may have about the vertical articulation process.

Thank you for your hard work and valuable feedback!

Appendix O: Vertical Articulation Panelist Professional Backgrounds

Course(s) and/or Grade Level(s) Taught During the 2012-13 School Year:
• Grade 8 Math; Grade 8 Math I; Grade 8 Science • 8th grade science, 6th-8th gd gen sci elective, 7th-8th gd engineering elective • English language arts - 6th & 8th grade • NONE - District Level Administrator • 5th - all subjects • Special Topics in Mathematics, Common Core Math I • 8th grade science • grade 3-5, science and social studies • 3rd, 4th, & 5th Instructional coach • Alg. I / Math I, Geometry, OCS Math I • EC inclusion 6th rade ELA • ELA grade 8 • Biology, Honors Biology, Oceanography • none - curric. Coord K-5 • none - HS math curriculum Specialist • AP Biology, H. Biology 2 and H. Biology 1 • Eng II, Eng II Honors, Eng IV Honors • English Language Arts - Grade 8 • honors Biology (9th grade) MS Professional Development • ESL 6-12 • 8th grade science • 4th grade math & science • science 6th grade • Language Arts Grade 7 • 3rd grade Academically and Intelligently Gifted • English Language Arts / Reading & Social Studies (5th Grade) • 7th grade math

Appendix P: Vertical Articulation Evaluation Summary

1. To what extent was the length of this meeting appropriate for completing the vertical articulation?				
Too Little Time		About Right		Too Much Time
1	9	10	6	1

2. To what extent do you believe the Round 3 impact accurately reflected the percentage of students that should be classified in each level across subject areas?				
Not at all Accurate		Somewhat Accurate		Extremely Accurate
1	3	14	9	0

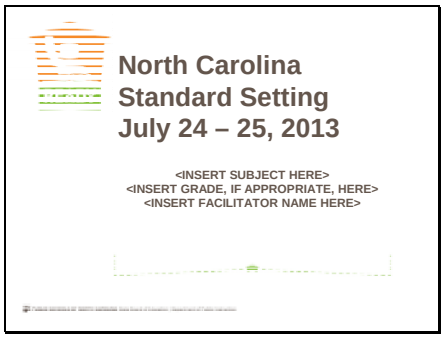
3. What was your level of comfort with the vertical articulation impact rating task?				
Not at all Comfortable		Somewhat Comfortable		Extremely Comfortable
0	0	8	11	8

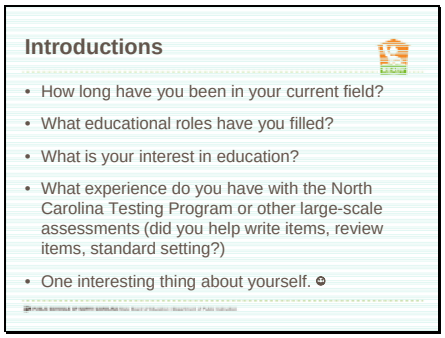
4. How comfortable are you with the final group-level impact recommendations?				
Too Little Time		About Right		Too Much Time
0	0	11	12	4

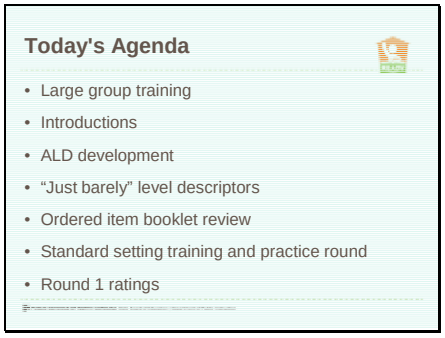
5. How influential were the following factors in determining your impact recommendations?					
	Not at all Influential		Somewhat Influential		Very Influential
A. The Round 3 impact data	0	0	5	12	10
B. The external reference data (teacher survey, Explore linking study)	1	5	7	10	4
C. Other panelists' comments/ Group Discussion	1	1	5	12	8
D. Your professional experience	0	2	3	12	10

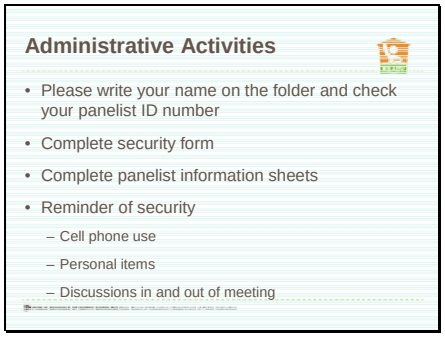
6. Please use the back of this page to provide any additional comments you may have about the vertical articulation process.
I respect their standards-based decision, but felt like the impact required a shift.

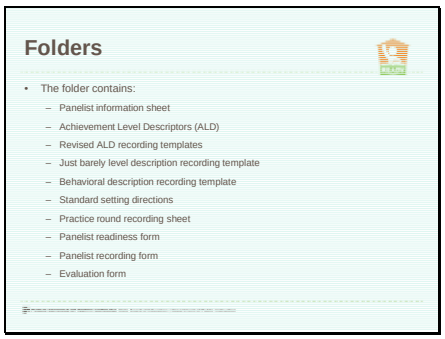
Appendix Q: Standard Setting Presentation Slides

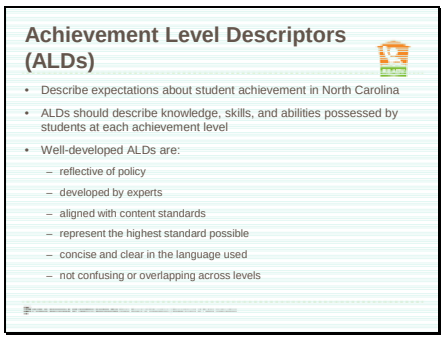












Appendix Q

Achievement Level Descriptors (ALDs)

	Grade 3 Math: The student solves problems involving the major content for grade/course with connections to the standards for mathematical practice.			
	Level 2: Partial Command	Level 3: Moderate Command	Level 4: Strong Command	Level 5: Distinguished Command
Products and Quotients	Interprets products or quotients of whole numbers. Determines the unknown whole number in a multiplication or division problem by relating multiplication and division. Limit to factors less than or equal to 5.	Interprets products and quotients of whole numbers. Determines the unknown whole number in a multiplication or division problem by relating multiplication and division. One factor is less than or equal to 5.	Understands and interprets products and quotients of whole numbers. Determines the unknown whole number in a multiplication or division problem by relating multiplication and division. Factors are greater than 5 and less than 10.	Understands and interprets products and quotients of whole numbers. Determines the unknown whole number in a multiplication or division problem by relating multiplication and division. Represents the multiplication or division situation as an equation.

Achievement Level Descriptors (ALDs)

NAEP Grade 4 reading achievement-level descriptions present expectations of student performance in relation to a range of text types and text difficulty and in response to a variety of assessment questions intended to elicit different cognitive processes and reading behaviors.

Basic	Proficient	Advanced
Fourth-grade students performing at the *Basic* level should be able to locate relevant information, make simple inferences, and use their understanding of the text to identify details that support a given interpretation or conclusion. Students should be able to interpret the meaning of a word as it is used in the text.	Fourth-grade students performing at the *Proficient* level should be able to integrate and interpret texts and apply their understanding of the text to draw conclusions and make evaluations.	Fourth-grade students performing at the Advanced level should be able to make complex inferences and construct and support their inferential understanding of the text. Students should be able to apply their understanding of a text to make and support a judgment.

Achievement Level Descriptors (cont'd)

- Copies of preliminary ALDs for your grade levels are in sub-committee folders
- Four levels for each test (grade):
  - Level 1
  - Level 2
  - Level 3
  - Level 4
- Represent what a student should know and be able to do for given the content standards and the test
  - These are policy statements
- Please take a few moments to read through the preliminary ALDs in your folder
- DISCUSSION: What are your observations regarding these policy ALDs?

Content Standards/Test Blueprint

- Common Core State Standards/Essential Standards
  - Standards drive the test development process
  - Review these prior to developing ALDs and at any point you question item content
- Tests are developed from items written to the Common Core State Standards or Essential Standards
- Test specifications guide the test creation process (Test Blueprint)
  - Number of items per standard
  - Number of items per objective
- Please review the test blueprint

Achievement Level Descriptors (cont'd)

- Writing ALDs
  - The goal of this activity is to write clear and concise ALDs
    - Your role:
      - Link policy expectations to the content assessed
      - Describe expected typical performance of students at each achievement level
        - » Level 1, Level 2, Level 3, and Level 4
      - Appoint one person as a recorder

Table Number	Content Area	
1	<FACILTATOR, PLEASE INSERT>	<FACILTATOR, PLEASE INSERT>
2	<FACILTATOR, PLEASE INSERT>	<FACILTATOR, PLEASE INSERT>
3	<FACILTATOR, PLEASE INSERT>	<FACILTATOR, PLEASE INSERT>

Lunch!

12:15 - 1:00pm

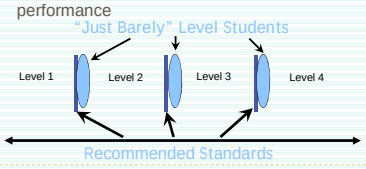
Please return to begin promptly at 1:00pm

Achievement Level Descriptors

- Large Group Activity (take notes!):
  - What distinguishes the adjacent levels in the ALDs you developed?
    - Compare the Level 1 and Level 2 ALDs
    - Compare the Level 2 and Level 3 ALDs
    - Compare the Level 3 and Level 4 ALDs
  - Share observations

"Just Barely" Level Students

- The "just barely" level student:
  - Borderline or threshold student in terms of performance



"Just Barely" Level Student Descriptors

- Table Activity:
  - At the table, discuss classroom examples of what just barely students should know and be able to do for each achievement level cut.
    - Suggestions should be concrete and clearly related to the ALD level definitions (three suggestions per threshold).
    - One table member should be appointed the recorder.

Table Number	Threshold Cut
1	Level 2
2	Level 3
3	Level 4

"Just Barely" Level Student Descriptors

- What should they do?
- What skills should they possess?
- What should they know?
- What academic behaviors demonstrate that they are Level 2? Level 3? Level 4?

- Refer back to the ALDs for each achievement level
- The common understanding of the "just barely" level student you create now should anchor your standard setting judgments

"Just Barely" Level Student Descriptors

- Large Group Activity:
  - The "just barely" level student
    - Each table provides examples discussed
    - Agree on several examples for each performance level cut
      - Facilitator captures comments
      - Once you have agreed upon the "just barely" level descriptions across cuts, the facilitator will have them printed

Ordered Item Booklet Review

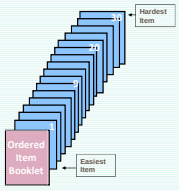
- Take the test!
  - Gain an appreciation of the experience
  - Get a sense of the difficulty of the items
- For your eyes only
- Think about the "just barely" level students and the content assessed by the items
- You will receive the answer key

Ordered Item Booklet Review

- Review of the Ordered Item Booklet
  - One item per page
  - Ordered from easiest to most difficult based on empirical performance data
  - Represents a continuum of item difficulty
  - Think about the knowledge and skills required to get each item correct
  - Items for each subject are from the Spring 2013 operational administration

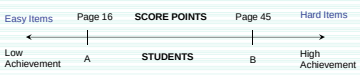
Ordered Item Booklet Review

- Represents the range of skills/abilities assessed.
- Includes operationally scored items.
- Tool by which cut score recommendations are made.
- Based on North Carolina student performance on the Spring 2013 tests.



Rationale for Ordered Item Booklet

- Relationship between item difficulty and student achievement
  - An item's difficulty value tells us something about the achievement of the student who will earn it
  - Student A has the same probability (2/3) of answering item 16 correctly as student B has of answering item 45 correctly



Ordered Item Booklet Review

- Compare each item to the previous one.
  - Why is getting this item correct more difficult?
  - Is this item measuring a higher level of performance?
- Consider the knowledge and skills a student must know to answer each item correctly
- Item orderings are based on actual student performance
- Order will be sensitive to instruction
- If you are a teacher, you may present material in a different order or teach materials that others do not
- Take an hour to review

Appendix Q

Break!

3:15 - 3:30pm

Please return to begin promptly at 3:30pm

Steps in the Item Mapping Process

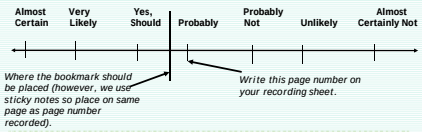
- Make first round of recommendations
- Place a bookmark in the ordered item book that distinguishes the knowledge and skills all students at a given level should have acquired from those they should not have acquired
- This applies to all students within a given level, so best to think about those right at the cut (i.e., the "just barely" level students)
- By "acquired," we mean that the students should answer this question correctly more often than not, as well as all of the items preceding the bookmark

Determining the Bookmark Location – Theory vs. Practice

Theory		Practice	
Page	Answer	Page	Answer
19	Y	19	Y
20	Y	20	Y ←
21	Y	21	N
22	Y ←	22	N
23	N	23	N
24	N	24	Y ←
25	N	25	N

Determining the Bookmark Location

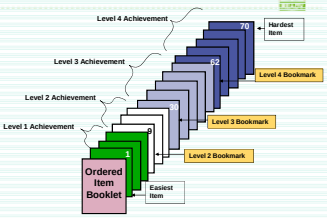
- Start with the first item and ask: Should a hypothetical student who is just barely at the performance level answer this question correctly more often than not?
- If YES, then move to the next item.
- Repeat this process until you get to several NO's.
- Go back to your last 'YES', write this page number on your panelist recording sheet.



Where the bookmark should be placed (however, we use sticky notes so place on same page as page number recorded).

Write this page number on your recording sheet.

End Product of Item Mapping Round



Item Mapping – What Judges Do

- Start with the Level 2 achievement level
- Read each item and identify skills needed for a correct response
- Review just barely descriptors and ALDs
- Decide: Should students who are just barely at achievement level 2 answer this question correctly most of the time?
  - If yes, read on.
  - If unsure, slow up
  - If no, write down the page number of your last yes
- Move to the Level 3 cut and then to the Level 4
- Suggestion: Mark off "zones" first; then revisit the neighborhoods to set the cuts

5 Keys to Being a Great Judge

- Judgments vs. Data
- "Should" vs. Will (or Can)
- Consider all North Carolina students who take the test
- Think of "just barely" level students, not all who met the standards
- Respect others' judgment…there is no right answer

Practice Standard Setting Exercise

- Think about
  - What each of the ten items measure
  - The ALDs
  - "Just barely" level students
  - What students should know
- Write down notes, impressions, questions, reactions
- Consider each item – what's tested, how hard, and should students be able to answer correctly?
- Bookmark one point: Level 3

Practice Standard Setting Feedback

- Discuss the individual cut scores recommended
  - What is the approximate mean page number for the group?
- How much do the individual cut scores vary?
  - What is the minimum and maximum cut score?
- Why do the individual cut scores vary?
- Do you understand how to do the task?

Round One

- Start with Achievement Level 2
- Review "just barely" level descriptors and ALDs
- Decide: Should students who are just barely at Achievement Level 2 answer this question correctly more often than not?
  - If yes, proceed to the next item in the booklet
  - If no, continue on and review several additional items
  - Place your bookmark at the item that received your last "yes" response
- Repeat this task for Level 3 and Level 4

Round One – Panelist Recording Sheet

Achievement Level	Page Number		
	Round 1	Round 2	Round 3
Level 2			
Level 3			
Level 4			

Round One

- Independently find the last item for which a student who is just barely at Achievement Level 2 should get this item correct most of the time
- Reminder: there may be a 'region' of items, so do not stop at your first "No." Go through at least five more items, set up a region, and focus on where the bookmark is best located within this region
- Place a sticky note on the last "Yes" and record that page number on your panelist recording sheet
- Repeat this task for Level 3 and Level 4

Round One

- Turn in your panelist recording sheet with the three cut scores clearly marked as page numbers from the ordered item booklet
- Facilitator will provide aggregate feedback after break
- Prepare to discuss the rationale for your decisions with your group
- A reminder:
  - All of you are experts
  - There is no "right" answer

Round One

- Do you have any questions regarding the first round of standard setting?
- Please complete the Round One Readiness Form
- Please begin making your Round One ratings

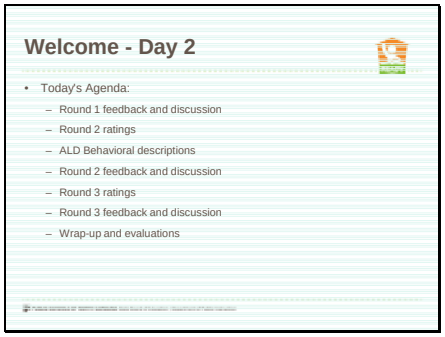
End of Day 1

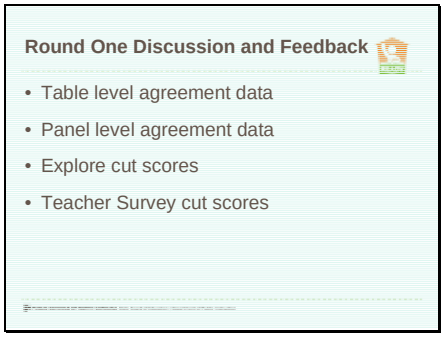
- Close out activities for Day 1:
  - Turn in all materials to facilitator
    - All "just barely" descriptors and ALDs
    - All Folder 2 materials
    - All hand-written materials
    - All feedback and handouts
  - Return to this room at 8:00am tomorrow morning

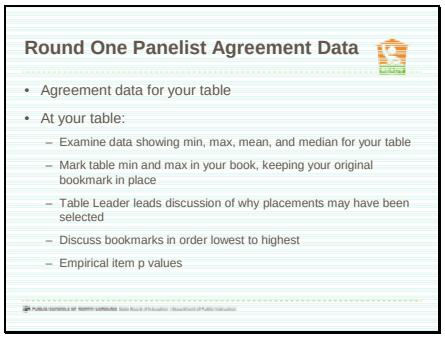
Have a great evening! ☺

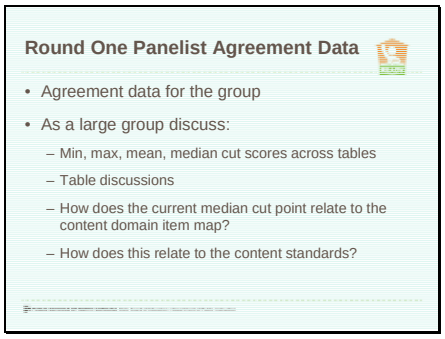
Please return to this committee room by 8:00am tomorrow

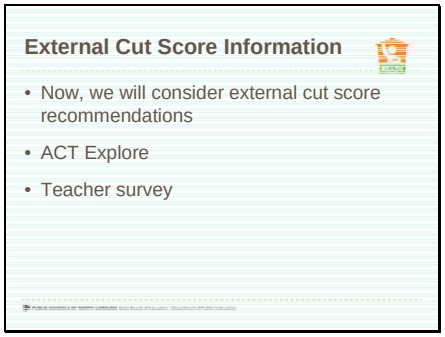
Appendix Q

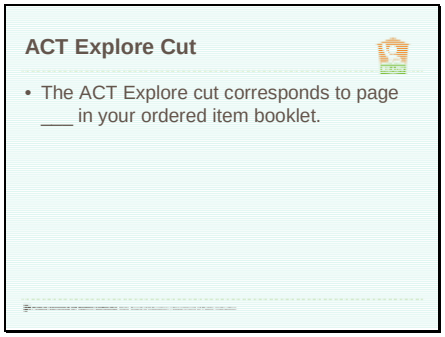


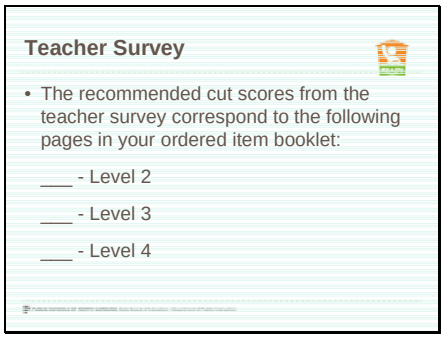


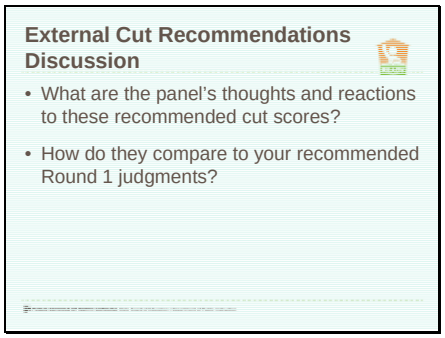












Round Two

- Start with Achievement Level 2
- Review "just barely" level descriptors and ALDs
- Think about the small and large group discussion
- Review your region and Round 1 bookmark
- Decide: Should students who are just barely at Achievement Level 2 answer this question correctly more often than not?
  - If yes, proceed to the next item in the booklet
  - If no, continue on and review several additional items
  - Place your bookmark at the item that received your last "yes" response
- Repeat this task for Level 3 followed by the Level 4.

Round Two – Panelist Recording Sheet

Achievement Level	Page Number		
		Round 2	Round 3
Level 2			
Level 3			
Level 4			

Round Two

- Turn in your panelist recording sheet with the three cut scores clearly marked as page numbers from the ordered item booklet in the Round Two columns
- Workshop data analysts will aggregate scores
- Facilitator will provide aggregate feedback to panelists tomorrow
- Prepare to discuss the rationale for your decisions with your group
- A reminder:
  - All of you are experts
  - There is no "right" answer

Round Two

- Do you have any questions regarding the second round of standard setting?
- Please complete the Round Two Readiness Form

Break!

10:15 - 10:30pm

Please return to begin promptly at 10:30pm

Write Behavioral Description

- Purpose – to provide more detailed feedback to students and parents about achievement as related to knowledge, skills, and abilities
- Behavioral descriptions reflecting item content across the score scale
- Brief phrases that describe observable, content-oriented behavioral characteristics

Write Behavioral Description

- Content Domain Item Map
- Organized by empirical difficulty
  - Temporary score scale developed for this purpose
- Grouped in columns by content standards
- Look at where the items fall in the score scale and what KSAs are needed to answer the question correctly

Round Two Panelist Agreement Data

- Agreement data for your table
- At your table:
  - Examine data showing min, max, mean, and median for your table
  - Mark table min and max in your book, keeping your original bookmark in place
  - Table Leader leads discussion of why placements may have been selected
  - Discuss bookmarks in order lowest to highest

Appendix Q

Round Two Panelist Agreement Data

- Agreement data for the group
- As a large group discuss:
  - Min, max, mean, median cut scores across tables
  - Table discussions
  - Content domain item maps
  - Relationship to content standards

Round Two Impact Data

- The percent of students in each performance level is based on the suggested cut points and student data
- Student data are based on the 2013 test administration

Round 2 Impact Data

Impact Data Overall

Impact Data By Gender

Impact Data By Ethnicity

Round 2 Impact Data from Recommendations

- Discussion of impact data
  - Reasonable?
  - Relationship to the "just barely" level descriptor
    - Can do vs. should be able to do
- How does the impact data inform content-based judgments?
  - Normative-like information
  - Reasonableness check
  - Keep in the mind the "should" (and not "will" or "can") aspect of your judgments

Consideration of Impact Data and Bookmark

- Consider the student score distributions overall and by subgroup for each of the three cut scores from Round 2
- Consider the placement of the three bookmarks from Round 2
- Look at each item in the booklet and item map between where you placed your bookmark in Round 2 and where you would move it
- If you were to do so, determine what makes each item more difficult than the last and less difficult than the next

Lunch!

12:15 – 1:00pm

Please return to begin promptly at 1:00pm

Round Three

- Start with Level 2 achievement level
- Review "just barely" level descriptors
- Think about the small and large group discussion
- Think about the impact data
- Review your region and Round 2 bookmark
- Decide: Should students who are just barely at Achievement Level 2 answer this question correctly more often than not?
  - If yes, proceed to the next item in the booklet
  - If no, continue on and review several additional items
  - Place your bookmark at the item that received your last "yes" response
- Repeat this task for Level 3 followed by Level 4.

Round Three – Panelist Recording Sheet

Achievement Level	Page Number	
		Round 3
Level 2		
Level 3		
Level 4		

Round Three

- Turn in your panelist recording sheet with the three cut scores clearly marked as page numbers from the ordered item booklet in the Round Three columns
- Workshop data analysts will aggregate scores
- Facilitator will provide aggregate feedback to panelists
- This is final round of judgments
- A reminder:
  - All of you are experts
  - There is no "right" answer

Round Three

- Do you have any questions regarding the third round of standard setting?
- Please complete the Round Three Readiness Form

Break!

Collect and turn-in secure materials!!

1:30 - 2:30pm

Please return to begin promptly at 2:30pm

Round Three Recommendations

- Final Page Number cut score recommendations
  - Level 1:
  - Level 2:
  - Level 3:

Round Three Impact Data

- The percent of students in each performance level is based on the suggested cut points and student data
- Student data are based on 2013 test administration

Appendix Q