

Released Form

Published February 2026

Grade 6 Mathematics

North Carolina End-of-Grade Assessment



Public Schools of North Carolina

Department of Public Instruction | State Board of Education

Division of Accountability Services/North Carolina Testing Program

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1 What is the value of n in the equation below?

$$84.62 = n \div 10^2$$

- A 0.8462
- B 8.462
- C 846.2
- D 8,462

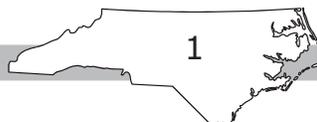
2 Which expression is equivalent to 6 less than the product of 4 and a number, y ?

- A $4y - 6$
- B $6 - 4y$
- C $(4 + y) - 6$
- D $6 - (4 + y)$

3 Two vertices of a polygon are located at $J(-4, 3)$ and $K(2, 3)$. What is the distance between J and K ?

- A 2 units
- B 4 units
- C 6 units
- D 8 units

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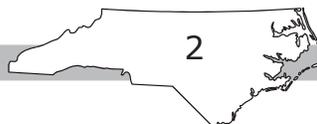


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- 4 When a number n is decreased by 13, the result is greater than 2. Which describes the set of all values of n that satisfy this condition?
- A $n = 15$
- B $n > 15$
- C $n < 15$
- D $n \geq 15$
- 5 A regular 12-sided figure has a side length of $3x + 5$. What is the perimeter of the figure?
- A $15x + 5$
- B $15x + 17$
- C $36x + 5$
- D $36x + 60$

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6 Which inequality is true?

A $|-4| < 2$

B $|-2| < 2$

C $|-4| > -2$

D $-2 > |2|$

7 Madison, Renee, and Ben read a total of 71 books.

- Madison read m books.
- Renee read 5 times as many books as Madison.
- Ben read 1 less than 2 times as many books as Renee.

Which expression represents the number of books Ben read?

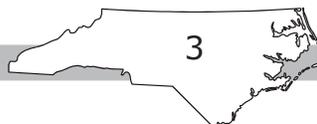
A $2(5m) - 1$

B $2(5m - 1)$

C $1 - 2(5m)$

D $5(1 - 2m)$

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- 8 Which expression is equivalent to 3 increased by twice the number n ?
- A $3(2 + n)$
 - B $2(3 + n)$
 - C $2 + n + 3$
 - D $3 + 2n$
- 9 Point M is located at $(-1, 2)$, and point P is located at $(-1, -1)$. What is the distance between point M and point P ?
- A 1 unit
 - B 2 units
 - C 3 units
 - D 4 units

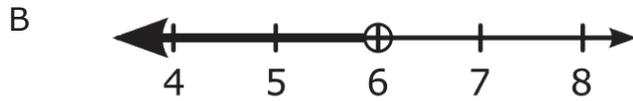
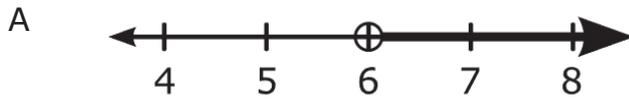
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10 Which graph represents the solution for $b > 6$?



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Questions 11 through 15 require you to write your answers in the boxes. Write only one number or symbol in each box.

11 What is the value of the expression below?

$$2 \cdot 11.27 - 14.66$$

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

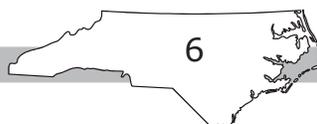
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12 What is the value of the expression below?

$$(4 \times 10^3) + (5 \times 10^4)$$

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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- 13 An airplane traveled $125\frac{1}{2}$ miles in $\frac{1}{4}$ of an hour. What was the average speed, in miles per hour, of the airplane?

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

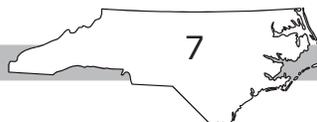
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- 14 Which number goes in the blank to make the equation true?

$$12(x + 4) - 3 = 12x + \underline{\hspace{2cm}}$$

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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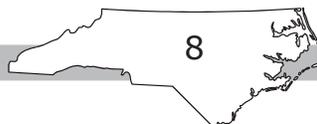


- 15 Adam is going on a 3,250-mile trip. He will drive 250 miles each day. How many days will Adam's trip take?

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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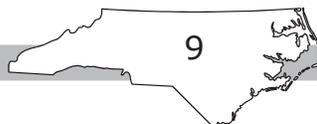


This is the end of the calculator inactive test questions.

Directions:

1. Look back over your answers for the calculator inactive questions. You will not be able to go back and work on these questions once you are given a calculator.
2. Make sure all your answers are entered appropriately in your book.
3. Raise your hand to let your teacher know you are ready to begin the calculator active test questions.
4. Do not begin work on the calculator active test questions until your teacher has given you a calculator.

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Questions 16 through 20 require you to write your answers in the boxes. Write only one number or symbol in each box.

- 16 Allie bought two movie tickets for \$7.50 each, three sodas for \$2.50 each, a tub of popcorn for \$6.50, and some candy. She spent a total of \$32.00. How much did the candy cost?

(Note: Express the answer as dollars.cents.)

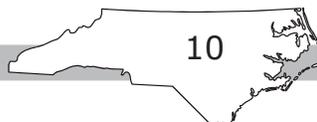
Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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- 17 The base area of a rectangular baking pan is $80\frac{3}{4}$ square inches. The width of the baking pan is $8\frac{1}{2}$ inches. What is the length of the pan, in inches?

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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- 18 The ratio of boys to girls in a classroom is 3 to 4. There are 9 boys in the classroom. How many girls are in the classroom?

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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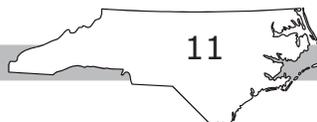
- 19 Lisa babysat during the month of June. Each week, Lisa deposited her earnings into a savings account.

Week	Earnings
1	\$33.00
2	\$27.50
3	\$55.00
4	\$44.00

To the nearest cent, what was Lisa’s mean deposit for the four weeks in June?
(Note: Express the answer as dollars.cents.)

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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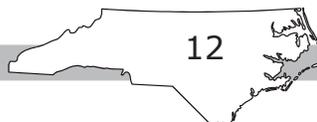


- 20 Two whole numbers have a greatest common factor of 2 and a least common multiple of 60. One number is 10. What is the other number?

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in your answer. Mixed numbers are entered by adding a space after the whole number. Spaces are only allowed between whole numbers and fractions.

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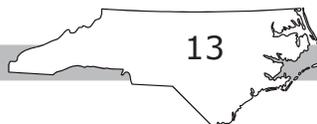


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- 21 Which point is located 9 units from $(-6, 4)$?
- A $(3, 4)$
 - B $(3, -4)$
 - C $(-15, -4)$
 - D $(15, 4)$
- 22 A school cafeteria orders plain milk and chocolate milk in a ratio of 1 to 3. What is the ratio of chocolate milk to total milk ordered?
- A 1 chocolate milk for every 3 milks ordered
 - B 1 chocolate milk for every 4 milks ordered
 - C 3 chocolate milks for every 1 milk ordered
 - D 3 chocolate milks for every 4 milks ordered

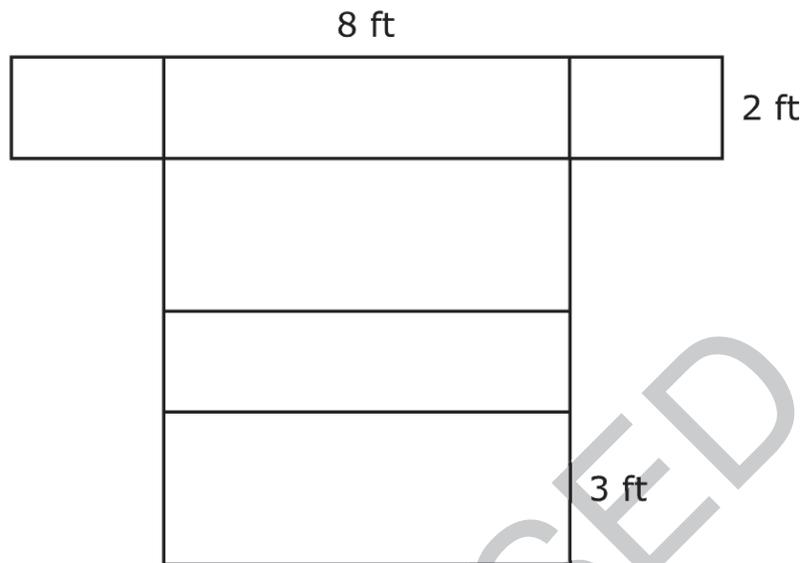
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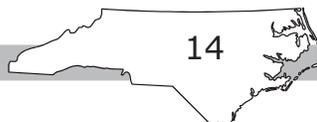
23 This shows the net of a rectangular prism.



What is the surface area of the rectangular prism?

- A 22 square feet
- B 40 square feet
- C 46 square feet
- D 92 square feet

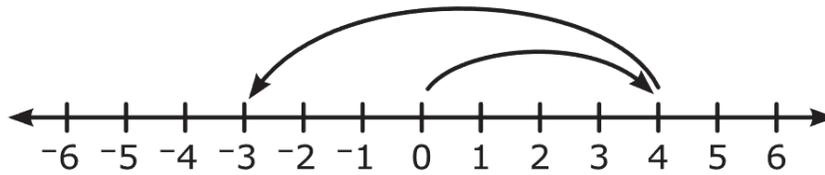
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24 A model of an expression is shown.



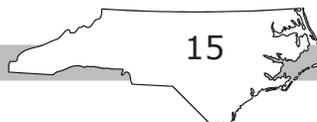
Which expression is represented by this model?

- A $4 - -7$
- B $4 + -7$
- C $4 - -3$
- D $4 + -3$

25 Jeremy made the following grades on his last 5 quizzes: 68, 75, 83, 88, and 92. What is the lowest score Jeremy could get on the 6th quiz to have an unrounded average of at least 80?

- A 78
- B 76
- C 74
- D 72

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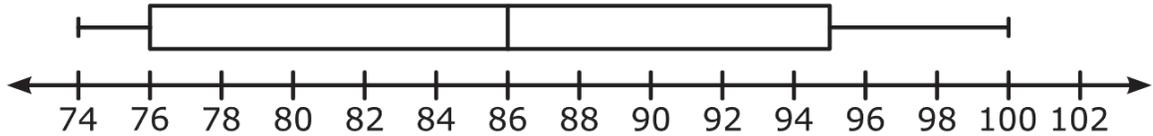


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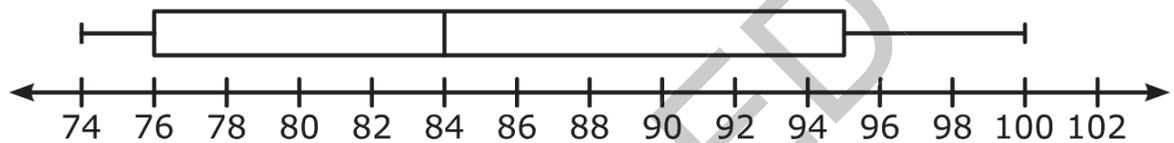


26 A librarian recorded the number of books checked out over 7 days. The number of books checked out were 92, 76, 83, 74, 84, 95, and 100. Which box plot correctly displays this data?

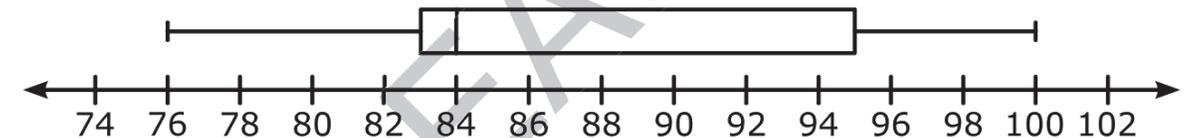
A



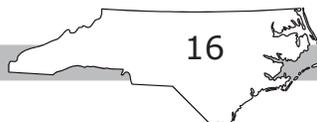
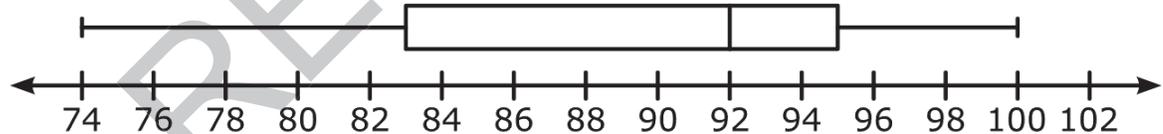
B



C



D



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27 In a coordinate plane, a quadrilateral has vertices $(-2, 3)$, $(-1, 7)$, $(2, 7)$, and $(0, 3)$. What is the area of the quadrilateral?

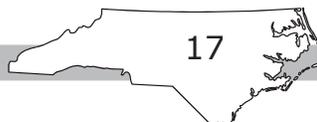
- A 10 square units
- B 9.5 square units
- C 9 square units
- D 8.5 square units

28 Variables x and y have a proportional relationship. This table shows some values for x and y .

x	y
1	3
3	9
4	12
9	?

What is the value of y when $x = 9$?

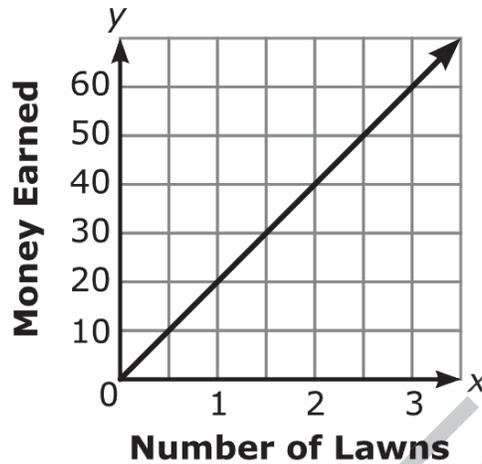
- A 15
- B 18
- C 24
- D 27



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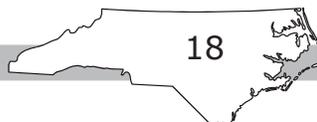
29 This graph shows the amount of money Henry earns mowing lawns.



Which equation **best** represents the graph?

- A $y = 20x$
- B $x = 20y$
- C $y = 10x$
- D $x = 10y$

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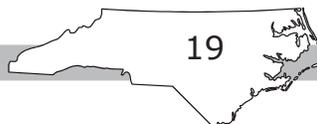


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- 30 Which ratio is **not** equivalent to 48 to 6?
- A 24 to 3
 - B 96 to 12
 - C 72 to 9
 - D 100 to 58
- 31 James has 42 stamps. He gives Karen 20 stamps. What percent, to the nearest whole percent, of his stamps does James give Karen?
- A 42%
 - B 48%
 - C 52%
 - D 54%

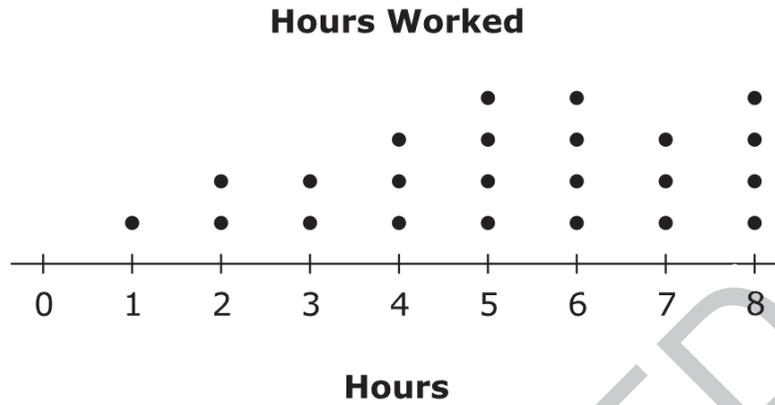
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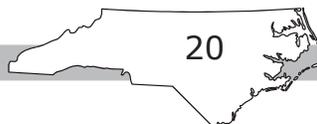
- 32 This dot plot shows the number of hours worked yesterday by each employee at a company.



Employees are paid \$15 per hour. How many employees were paid more than \$90 yesterday?

- A 2
- B 7
- C 11
- D 15

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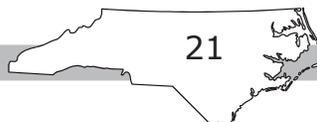
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- 33 A container is in the shape of a right rectangular prism. Its base dimensions are $18\frac{1}{4}$ in. by $12\frac{1}{2}$ in., and its height is $5\frac{1}{2}$ in. The container is filled three-fourths full with water. What is the volume of the water in the container?
- A $1,568\frac{23}{64}$ cubic inches
- B $1,254\frac{11}{16}$ cubic inches
- C $941\frac{1}{64}$ cubic inches
- D $313\frac{43}{64}$ cubic inches
- 34 The temperature in City F was 58°F .
- The temperature in City G was 5° cooler than in City F.
 - It was 8° warmer in City H than in City G.
 - It was 13° degrees cooler in City J than in City F.
 - It was 12° degrees warmer in City K than in City H.

Which list correctly puts the cities' temperatures in order, from coldest to warmest?

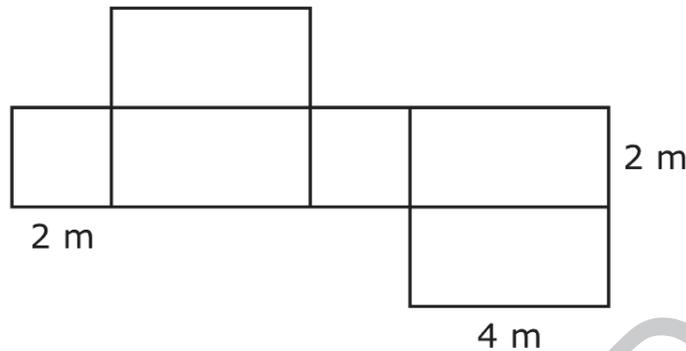
- A City J, City G, City F, City H, City K
- B City G, City H, City K, City J, City F
- C City K, City H, City F, City G, City J
- D City F, City J, City K, City H, City G



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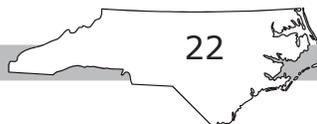


35 The net of a right rectangular prism is shown.



What is the surface area of the prism?

- A 32 m²
 - B 36 m²
 - C 40 m²
 - D 48 m²
- 36 Ashley made 88 out of 116 shots during the basketball season. **Approximately** what percent of shots did she make?
- A 70%
 - B 76%
 - C 82%
 - D 88%

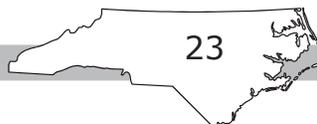


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- 37 Tracy collects stamps. She has a total of 780 stamps. Twenty percent of the stamps are rare. How many stamps in her collection are rare?
- A 624
 - B 312
 - C 156
 - D 130
- 38 A store sells necklaces. The price of a necklace is directly proportional to its length. A 9-inch necklace sells for \$147. How much would a 21-inch necklace cost?
- A \$343
 - B \$392
 - C \$441
 - D \$490

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39 Elizabeth is assigned to read a 160-page book. She estimates that she must read 5% of the total book each night in order to finish it by the due date. How many pages does she estimate that she must read each night?

- A 80
- B 16
- C 8
- D 4

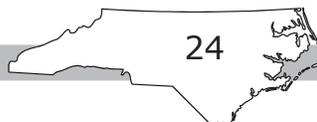
40 Lydia has to take 4 math tests.

- She wants her test average to be at least 90.
- Her grades for the first 3 tests were 96, 88, and 94.

What is the lowest test grade she can make on the 4th test that will allow her to have at least a 90 average?

- A 80
- B 82
- C 86
- D 90

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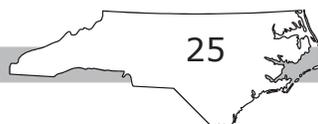
- 41 A cafeteria manager must count the number of students who buy lunch each day of school. This week she has the numbers for the first 4 days.

Day	Number of Students
Monday	148
Tuesday	136
Wednesday	130
Thursday	142

What is the mean number of students for the four days?

- A 124
- B 127
- C 136
- D 139

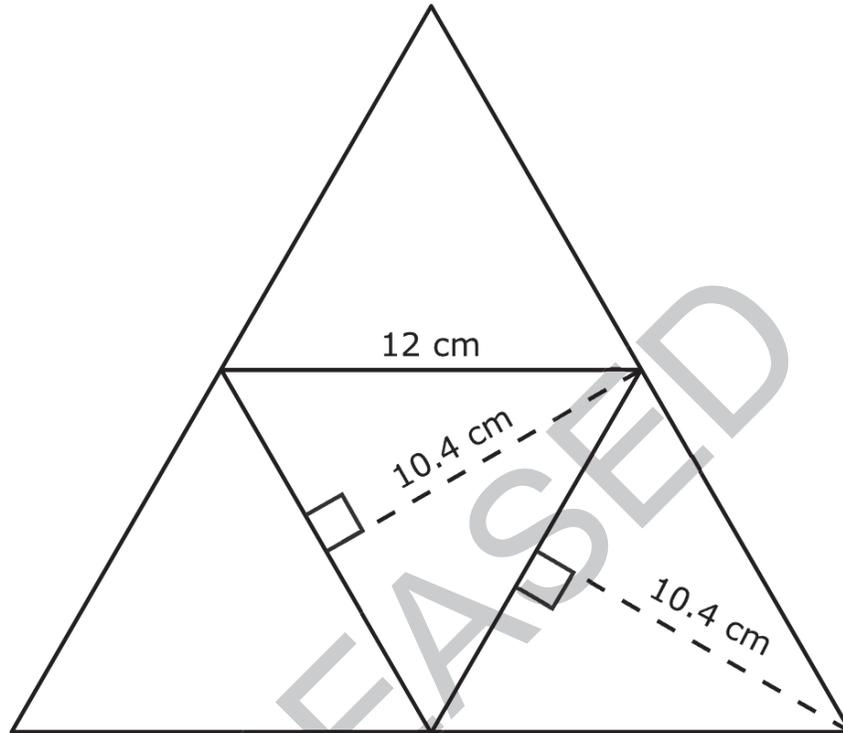
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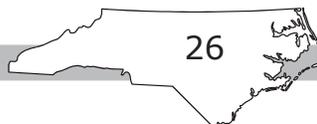


- 42 A net for a three-dimensional figure is shown. The net is composed of 4 congruent equilateral triangles.



What is the **approximate** surface area of the three-dimensional figure?

- A 131 cm²
- B 250 cm²
- C 262 cm²
- D 500 cm²



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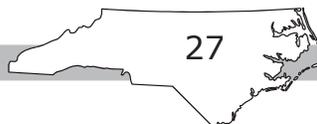
43 This table shows how four students scored on a math quiz.

Names	Number Correct	Total
Julie	17	25
Kyle	19	25
Malik	22	25
Olivia	24	25

Which student answered 88% of the quiz correctly?

- A Julie
- B Kyle
- C Malik
- D Olivia

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44 Ms. Foust has a bug collection.

- 14 of the bugs have yellow markings.
- 8 of the bugs have red markings.
- 12 of the bugs have both yellow and red markings.

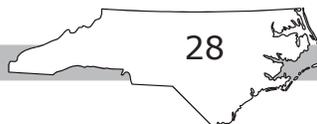
What is the ratio of bugs with markings of one color to bugs with markings of both colors?

- A 11 : 6
- B 6 : 11
- C 11 : 20
- D 20 : 11

45 John's dog ate 50 cans of dog food in 31 days. At this rate, **approximately** how many cans of dog food would John's dog be expected to eat in 6 days?

- A 25
- B 12
- C 10
- D 4

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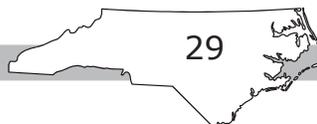


This is the end of the Mathematics test.

Directions:

- 1. Look back over your answers for the calculator active questions only.**
- 2. Make sure all your answers are entered appropriately in your book.**
- 3. Put all of your papers inside your test book and close your test book.**
- 4. Place your calculator on top of the test book.**
- 5. Stay quietly in your seat until your teacher tells you that testing is finished.**
- 6. Remember, teachers are not allowed to discuss questions from the test with you, and you are not allowed to discuss with others any of the test questions or information contained within the test.**

RELEASED



GRADE 6 MATHEMATICS RELEASED FORM

Grade 6 Mathematics RELEASED Form 2026 Answer Key

Calculator Inactive



Item Number	Type	Key	DOK*	Standard
1	MC	D	1	6.EE.1
2	MC	A	1	6.EE.2
3	MC	C	1	6.G.3
4	MC	B	2	6.EE.8
5	MC	D	2	6.EE.3
6	MC	C	1	6.NS.5
7	MC	A	2	6.EE.6
8	MC	D	1	6.EE.2
9	MC	C	1	6.NS.8
10	MC	A	1	6.EE.8
11	GR	7.88	1	6.NS.3
12	GR	54000	1	6.EE.1
13	GR	502	2	6.NS.1
14	GR	45	1	6.EE.3
15	GR	13	2	6.NS.2

GRADE 6 MATHEMATICS RELEASED FORM

Calculator Active



Item Number	Type	Key	DOK*	Standard
16	GR	3.00	2	6.EE.7
17	GR	9.5	2	6.NS.1
18	GR	12	2	6.RP.3
19	GR	39.88	1	6.SP.3.a
20	GR	12	3	6.NS.4
21	MC	A	2	6.NS.8
22	MC	D	2	6.RP.1
23	MC	D	2	6.G.4
24	MC	B	2	6.NS.9.a
25	MC	C	2	6.SP.3.a
26	MC	B	2	6.SP.4
27	MC	A	2	6.G.1
28	MC	D	2	6.RP.3
29	MC	A	2	6.EE.9
30	MC	D	1	6.RP.1
31	MC	B	2	6.RP.4
32	MC	B	2	6.SP.4
33	MC	C	2	6.G.2
34	MC	A	3	6.NS.7.a
35	MC	C	2	6.G.4
36	MC	B	2	6.RP.4
37	MC	C	1	6.RP.4
38	MC	A	2	6.RP.3
39	MC	C	2	6.RP.4

GRADE 6 MATHEMATICS RELEASED FORM

Item Number	Type	Key	DOK*	Standard
40	MC	B	3	6.SP.3.a
41	MC	D	2	6.SP.5.b
42	MC	B	3	6.G.4
43	MC	C	2	6.RP.4
44	MC	A	1	6.RP.1
45	MC	C	2	6.RP.3

***DOK:**

1 = Recall

2 = Skill/Concept

3 = Strategic Thinking

RELEASED

