

Tennessee Comprehensive Assessment Program

TCAP

Math | Grade 6 Practice Test Subpart 1, Subpart 2, & Subpart 3

Student Name

Teacher Name



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Test Administrator Instructions:

This practice test has Subpart 1, Subpart 2, and Subpart 3. There is also an answer document and an answer key at the end of this document. It is recommended that you print one copy of this practice test and pull the answer key before copying and distributing the practice test and answer document to your students.

This practice test is representative of the operational test but is shorter than the actual operational test. To see the details about the operational test, please see the blueprints located on the Tennessee Department of Education website.

Directions

Subpart 1 of this Practice Test booklet contains sample items for Grade 6 Math. You may use this test booklet for scratch paper or to make notes, but you must mark your answers on your answer document.

You MAY NOT use a calculator in Subpart 1 of this test booklet.

Sample 1: Selected-Response

1. Which expressions are equivalent to $4(9 + 3)$?
- A. $4(12)$
 - B. $36 + 3$
 - C. $36 + 12$
 - D. $4 + (9 + 3)$
 - E. $(9 + 3) + (9 + 3) + (9 + 3) + (9 + 3)$

Sample 2: Table

2. Select **True** or **False** in the table on your answer document to indicate whether each comparison is true.

	True	False
$3^2 < \frac{4}{9} + \frac{2}{3}$	<input type="radio"/>	<input type="radio"/>
$2(2^3 + 14 \bullet 2) \geq 9 \bullet 8$	<input type="radio"/>	<input type="radio"/>
$16.2 \bullet 3 - 24.6 < 72 \div 3 + 2.78$	<input type="radio"/>	<input type="radio"/>



1. In the coordinate plane, the point located at $(-3, 4)$ was reflected and is now located at $(3, 4)$. Which statement describes how the point was reflected?
 - A. The point was reflected across the x -axis.
 - B. The point was reflected across the y -axis.
 - C. The point was reflected across the x -axis, then the y -axis.
 - D. The point was reflected across the y -axis, then the x -axis.

2. What is the product of 3.28 and 2.9?
 - A. 0.618
 - B. 6.18
 - C. 9.512
 - D. 3.608

3. Select the expression that shows $54 + 48$ using the greatest common factor times the sum of two numbers.
 - A. $2(27 + 24)$
 - B. $3(18 + 17)$
 - C. $4(13 + 12)$
 - D. $6(9 + 8)$

4. Gretchen surveyed students at her school. She wanted to find out how many hours students spent on homework each week. Which survey group would give her the **most** accurate result?
 - A. girls in the cafeteria
 - B. boys in gym classes
 - C. students in language arts classes
 - D. students on the school's basketball team



5. Bananas cost \$0.59 per pound. Write an equation that could be used to find the total cost, y , of x pounds of bananas.

Write your answer in the space provided on your answer document.

6. Enter the value of w that makes this equation true:

$$w + 4\frac{1}{5} = 13\frac{19}{20}$$

Write your answer in the space provided on your answer document.

7. Select **all** of the expressions that are equivalent to $4 + w + 12w$.

- A. $4 + 13w$
- B. $13w^2 + 4$
- C. $2(2 + 6w) + w$
- D. $16 + 2w$
- E. $2(2 + 6w^2)$



8. Read the sentences below. On your answer document, mark **S** or **N** for each sentence.

S for “Statistical question” or
N for “Not a statistical question.”

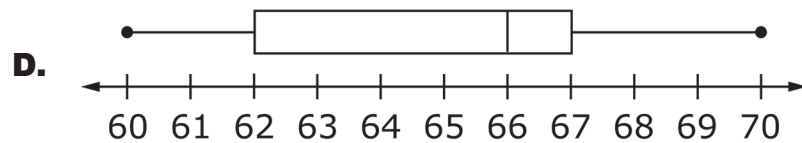
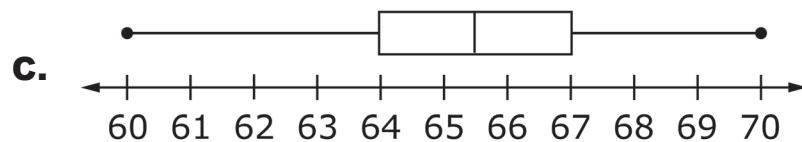
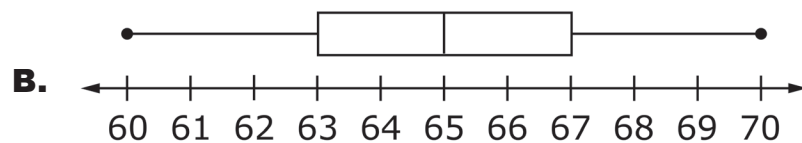
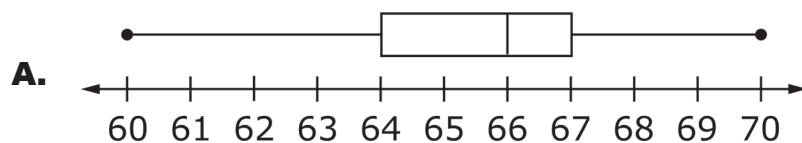
	S	N
How many minutes does each sixth-grade student read every night?	<input type="radio"/>	<input type="radio"/>
How many minutes does each teacher in your school read each night?	<input type="radio"/>	<input type="radio"/>
How many books did your family read this month?	<input type="radio"/>	<input type="radio"/>
Out of all the families that attend last month’s book fair, how manybooks has each family read this month?	<input type="radio"/>	<input type="radio"/>
How many minutes do you read every night?	<input type="radio"/>	<input type="radio"/>



9. The heights, in inches, of each of the players on a girls' basketball team are shown.

66, 65, 66, 70, 66, 68, 63, 60, 66, 68, 63, 65

Which box plot correctly represents the data?





- 10.** Quinn is playing in a trivia competition. He earns 50 points for each correct response, c . He loses 25 points for each wrong response, w . Which expression represents Quinn's total points in the trivia competition?
- A.** $50c + 25w$
 - B.** $25c$
 - C.** $25c - 50w$
 - D.** $50c - 25w$



**This is the end of Subpart 1 of the Grade 6 Math Practice Test.
Proceed to Subpart 2.**

**Directions**

Subpart 2 of this Practice Test booklet contains sample items for Grade 6 Math. Write your answers on your answer document.

You MAY use a calculator in Subpart 2 of this test booklet.

- 11.** The store has 40 bags of potato chips on the shelf. Of those, 30 bags are cheddar-flavored. What percentage of the bags of potato chips are **not** cheddar-flavored?

Write your answer in the space provided on your answer document.

- 12.** Janelle scored 88, 100, 76, 92, and 83 on her math tests. She has to take one more test. What is the **lowest** score Janelle can earn on her last test and still achieve a mean of **at least** 85?

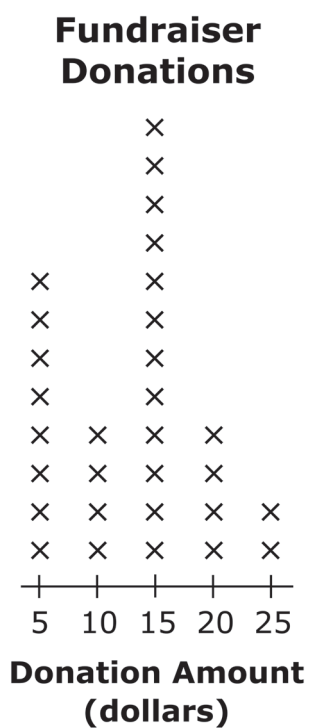
- A.** 71
- B.** 76
- C.** 82
- D.** 85

- 13.** Select **each** expression that shows a correct method for finding 36% of 400.

- A.** $36 \cdot 400$
- B.** $\frac{36}{100} \cdot 400$
- C.** $0.36 \cdot 400$
- D.** $\frac{0.36}{100} \cdot 400$
- E.** $\frac{3.6}{100} \cdot 400$



14. The line plot shows the dollar amounts of fundraiser donations.

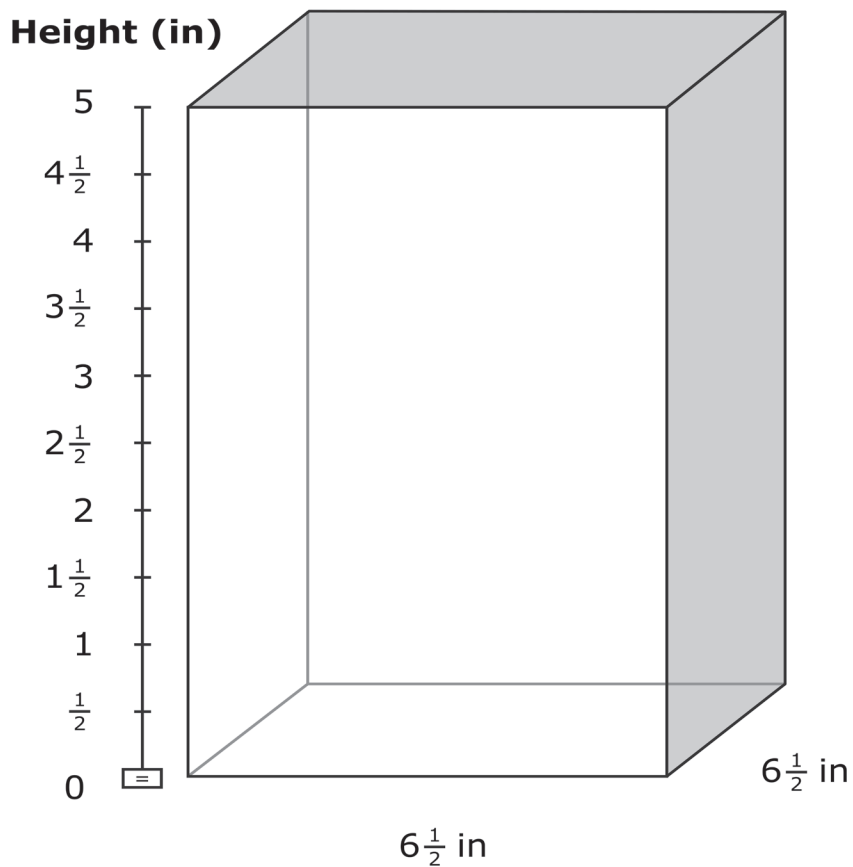


Which is a measure of center for the data?

- A. 13
- B. 20
- C. 25
- D. 29



15. Randy fills the prism shown with $126\frac{3}{4}$ cubic inches of sugar.



What is the height of sugar Randy put in the prism?

Write your answer in the space provided on your answer document.



- 16.** A gallon of gas costs \$2.50. Use the equation $p = 2.5g$ to find a total cost with price, p , and gallons, g . Match each number of gallons on the left with its equivalent dollar amount on the top. Mark your answers on your answer document.

	\$40.00	\$20.00	\$25.00
10 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 17.** Which expression is equivalent to the product of 6 and y ?

A. $6 + y$

B. $6 - y$

C. $\frac{6}{y}$

D. $6 \times y$



- 18.** The area of a rectangular patio is $90\frac{3}{10}$ square feet. The length is $10\frac{1}{2}$ feet.

What is the width, in feet, of the patio?

A. $\frac{5}{43}$

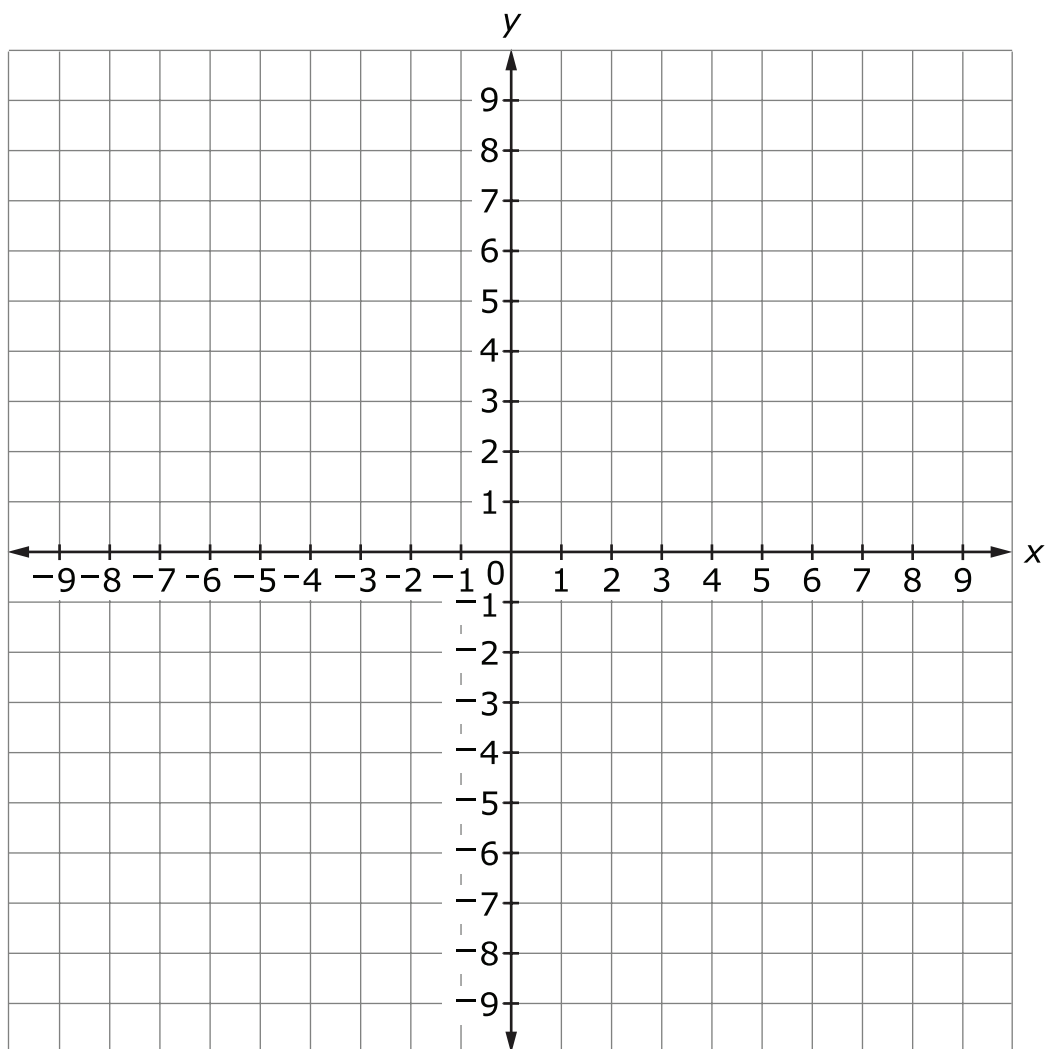
B. $8\frac{3}{5}$

C. $79\frac{4}{5}$

D. $948\frac{3}{20}$

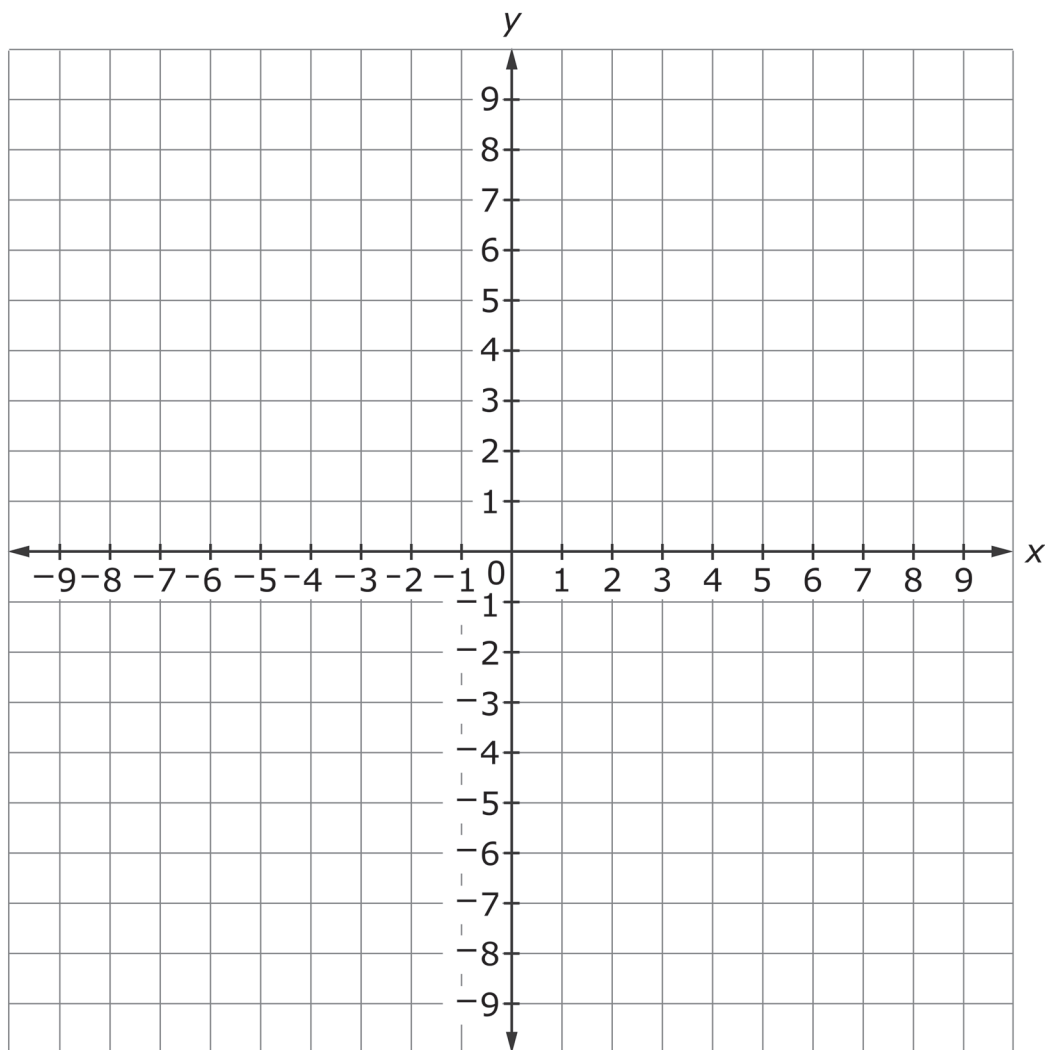


- 19.** Plot the point $(-4, 6)$ on the coordinate plane on your answer document.



**20. Part A**

Using the coordinate plane on your answer document, draw a right triangle with vertices $X(-3, 3)$, $Y(-3, -3)$, and $Z(5, -3)$.

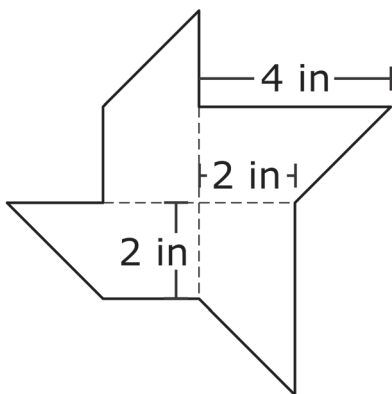
**Part B**

Line segment XZ is 10 units long. How many units is the perimeter of the right triangle?

Write your answer in the space provided on your answer document.



- 21.** A pinwheel's four blades are all congruent right trapezoids.



What is the combined area of the four blades, in square inches?

- A.** 8
- B.** 16
- C.** 24
- D.** 32



**This is the end of Subpart 2 of the Grade 6 Math Practice Test.
Proceed to Subpart 3.**

**Directions**

Subpart 3 of this Practice Test booklet contains sample items for Grade 6 Math. Write your answers on your answer document.

You MAY use a calculator in Subpart 3 of this test booklet.

- 22.** At a bake sale, plates of cookies, p , are sold for \$5 each. The amount of money from the sale of cookies is expressed as dollars, d . Which equation represents the earnings of the bake sale?

Plates of Cookies (p)	Earnings (d)
1	5
2	10
3	15
4	20

- A.** $p = 5d$
- B.** $d = p + 5$
- C.** $d = \frac{p}{5}$
- D.** $d = 5p$

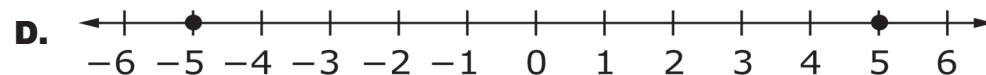
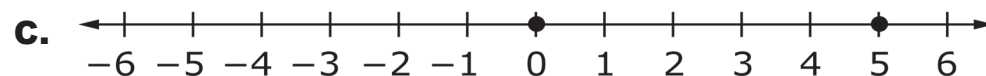
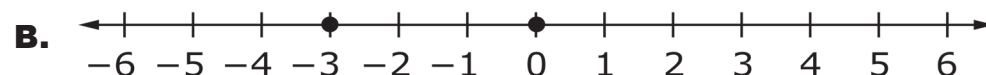
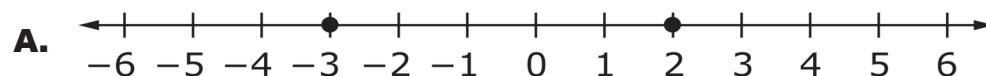


- 23.** The table shows the number of hours Emma babysat and her earnings.

Hours	Earnings
3	\$12
5	\$20
7	?
9	\$36

How much did Emma earn when she babysat for 7 hours?

- A.** \$22
B. \$24
C. \$28
D. \$32
- 24.** Choose the number line on which a number and its opposite are plotted.





- 25.** Brandon has \$50 in his savings account. He plans to deposit \$20 into his savings account each month. Select **all** expressions that could be used to find the amount of money Brandon will have in his savings account after x months of making deposits.
- A.** $20x - 50$
 - B.** $20x + 50$
 - C.** $20 + 50x$
 - D.** $20 + 50 + x$
 - E.** $50 + 20x$
- 26.** What is the distance between the points $(11, -7)$ and $(2, -7)$ on a coordinate plane, in units?
- A.** 13
 - B.** 9
 - C.** 5
 - D.** 0
- 27.** Brian paid \$27 for 12 gallons of gasoline. To the nearest cent, how much did one gallon of gasoline cost?
- A.** \$0.44
 - B.** \$2.00
 - C.** \$2.25
 - D.** \$15.00



- 28.** Adrianna has fabric that is $\frac{3}{4}$ yard long. She needs to cut the fabric into pieces that are $\frac{1}{8}$ yard long. How many $\frac{1}{8}$ -yard-long pieces will she have?

Write your answer in the space provided on your answer document.

- 29.** What is the value of $1500 \div (6^2 + 4^3) \bullet 37$?

Write your answer in the space provided on your answer document.

- 30.** What is the value of $6(x + 15) - 12$ when $x = 12$?

Write your answer in the space provided on your answer document.

- 31.** Select the value of r that makes $8r = 24$ true.

A. $\frac{1}{3}$

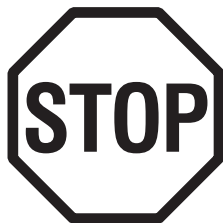
B. 3

C. 16

D. 32



- 32.** Sandra earns \$380 for working 20 hours. How much does she earn per hour?
- A.** \$360
 - B.** \$190
 - C.** \$19
 - D.** \$18



This is the end of the test.

TNReady Math Reference Sheet—Grade 6

1 inch = 2.54 centimeters

1 meter = 39.37 inches

1 mile = 5,280 feet

1 mile = 1,760 yards

1 mile = 1.609 kilometers

1 kilometer = 0.62 mile

1 pound = 16 ounces

1 pound = 0.454 kilograms

1 kilogram = 2.2 pounds

1 ton = 2000 pounds

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 gallon = 3.785 liters

1 liter = 0.264 gallons

1 liter = 1000 cubic centimeters

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Name: _____

Subpart 1 Sample Questions

1. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

2.

	True	False
$3^2 < \frac{4}{9} + \frac{2}{3}$	<input type="radio"/>	<input type="radio"/>
$2(2^3 + 14 \bullet 2) \geq 9 \bullet 8$	<input type="radio"/>	<input type="radio"/>
$16.2 \bullet 3 - 24.6 < 72 \div 3 + 2.78$	<input type="radio"/>	<input type="radio"/>

Subpart 1 Practice Test Questions

1. Ⓐ Ⓑ Ⓒ Ⓓ

2. Ⓐ Ⓑ Ⓒ Ⓓ

3. Ⓐ Ⓑ Ⓒ Ⓓ

4. Ⓐ Ⓑ Ⓒ Ⓓ

5.

6.

7. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

8.	S	N
How many minutes does each sixth-grade student read every night?	<input type="radio"/>	<input type="radio"/>
How many minutes does each teacher in your school read each night?	<input type="radio"/>	<input type="radio"/>
How many books did your family read this month?	<input type="radio"/>	<input type="radio"/>
Out of all the families that attend last month's book fair, how many books has each family read this month?	<input type="radio"/>	<input type="radio"/>
How many minutes do you read every night?	<input type="radio"/>	<input type="radio"/>

9. (A) (B) (C) (D)

10. (A) (B) (C) (D)

Subpart 2 Practice Test Questions

11.

12. (A) (B) (C) (D)

13. (A) (B) (C) (D) (E)

14. (A) (B) (C) (D)

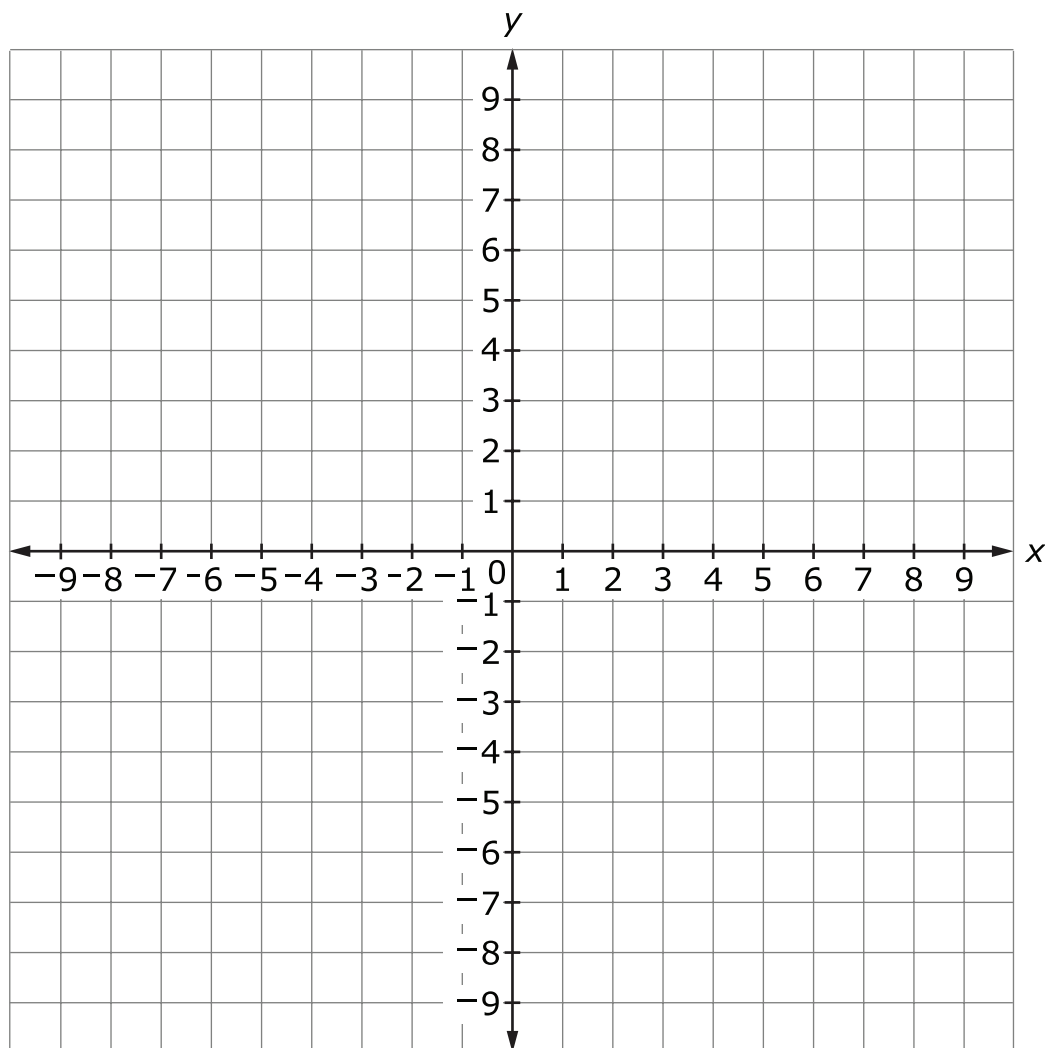
15.

16.		\$40.00	\$20.00	\$25.00
	10 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	8 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	16 gallons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

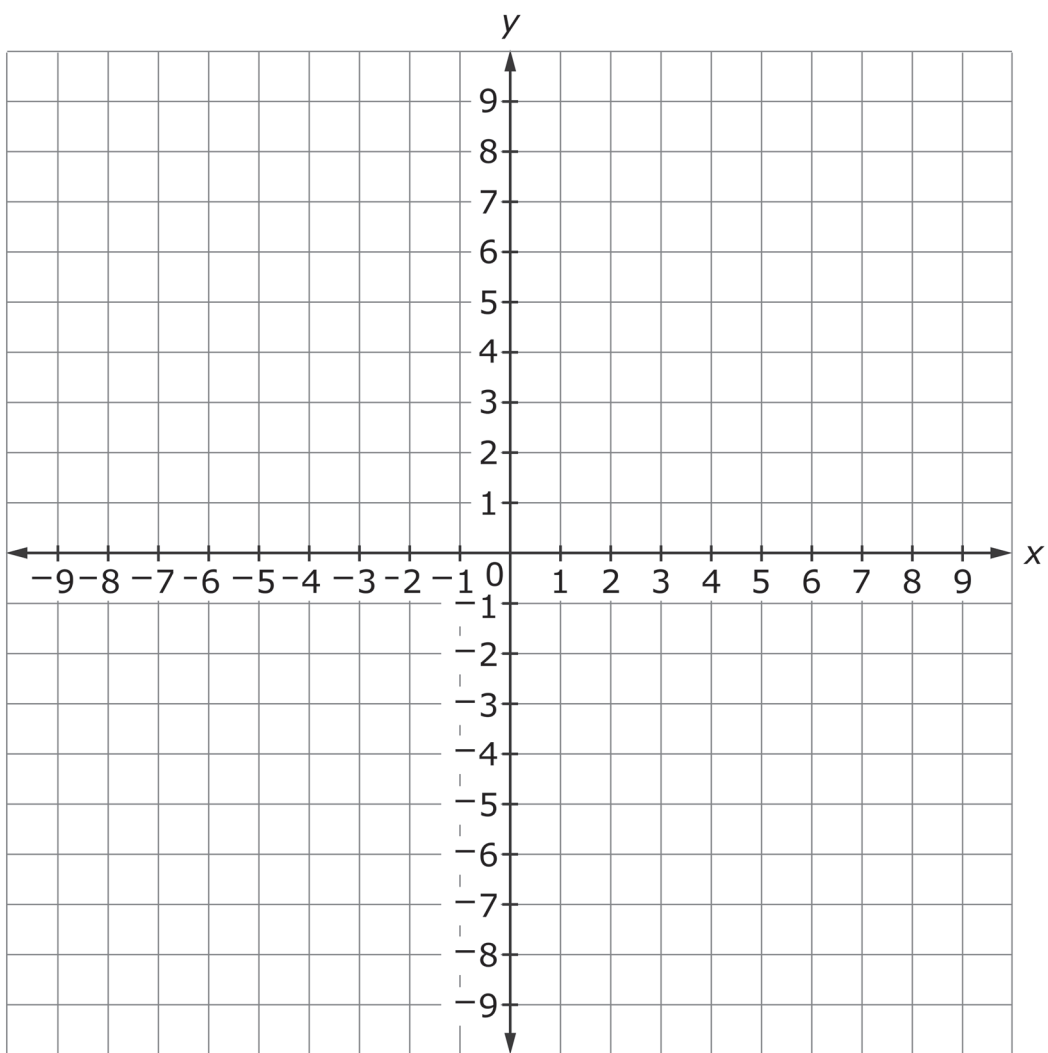
17. (A) (B) (C) (D)

18. (A) (B) (C) (D)

19.



20. Part A



Part B:

21. (A) (B) (C) (D)

Subpart 3 Practice Test Questions**22.** Ⓐ Ⓑ Ⓒ Ⓓ**23.** Ⓐ Ⓑ Ⓒ Ⓓ**24.** Ⓐ Ⓑ Ⓒ Ⓓ**25.** Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ**26.** Ⓐ Ⓑ Ⓒ Ⓓ**27.** Ⓐ Ⓑ Ⓒ Ⓓ**28.****29.****30.****31.** Ⓐ Ⓑ Ⓒ Ⓓ**32.** Ⓐ Ⓑ Ⓒ Ⓓ

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Subpart 1 Sample Questions

1. ● (B) ● (D) ●

2.

	True	False
$3^2 < \frac{4}{9} + \frac{2}{3}$	<input type="radio"/>	<input checked="" type="radio"/>
$2(2^3 + 14 \bullet 2) \geq 9 \bullet 8$	<input checked="" type="radio"/>	<input type="radio"/>
$16.2 \bullet 3 - 24.6 < 72 \div 3 + 2.78$	<input checked="" type="radio"/>	<input type="radio"/>

Subpart 1 Practice Test Questions

1. (A) ● (C) (D)

2. (A) (B) ● (D)

3. (A) (B) (C) ●

4. (A) (B) ● (D)

5. $y = 0.59x$ or any equivalent equation

6. $9\frac{3}{4}$ or any equivalent

7. ● (B) ● (D) (E)

8.

	S	N
How many minutes does each sixth-grade student read every night?	<input checked="" type="radio"/>	<input type="radio"/>
How many minutes does each teacher in your school read each night?	<input checked="" type="radio"/>	<input type="radio"/>
How many books did your family read this month?	<input type="radio"/>	<input checked="" type="radio"/>
Out of all the families that attend last month's book fair, how many books has each family read this month?	<input checked="" type="radio"/>	<input type="radio"/>
How many minutes do you read every night?	<input type="radio"/>	<input checked="" type="radio"/>

Answer Key

9. ☒ ☐ B ☐ C ☐ D

10. ☐ A ☐ B ☐ C ☒

Subpart 2 Practice Test Questions

11. 25

12. ☒ ☐ B ☐ C ☐ D

13. ☐ A ☒ ☒ ☐ D ☐ E

14. ☒ ☐ B ☐ C ☐ D

15. 3

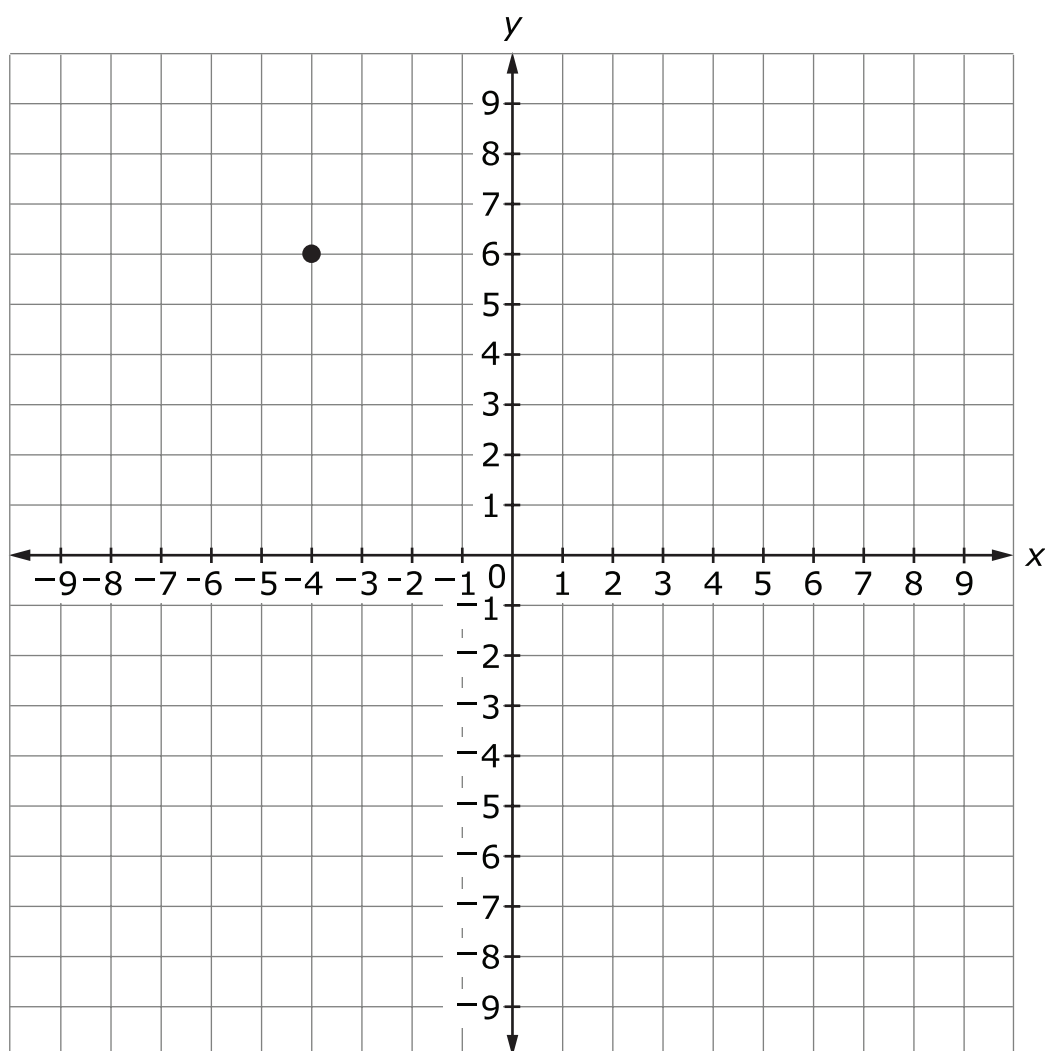
16.

	\$40.00	\$20.00	\$25.00
10 gallons	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
8 gallons	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
16 gallons	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

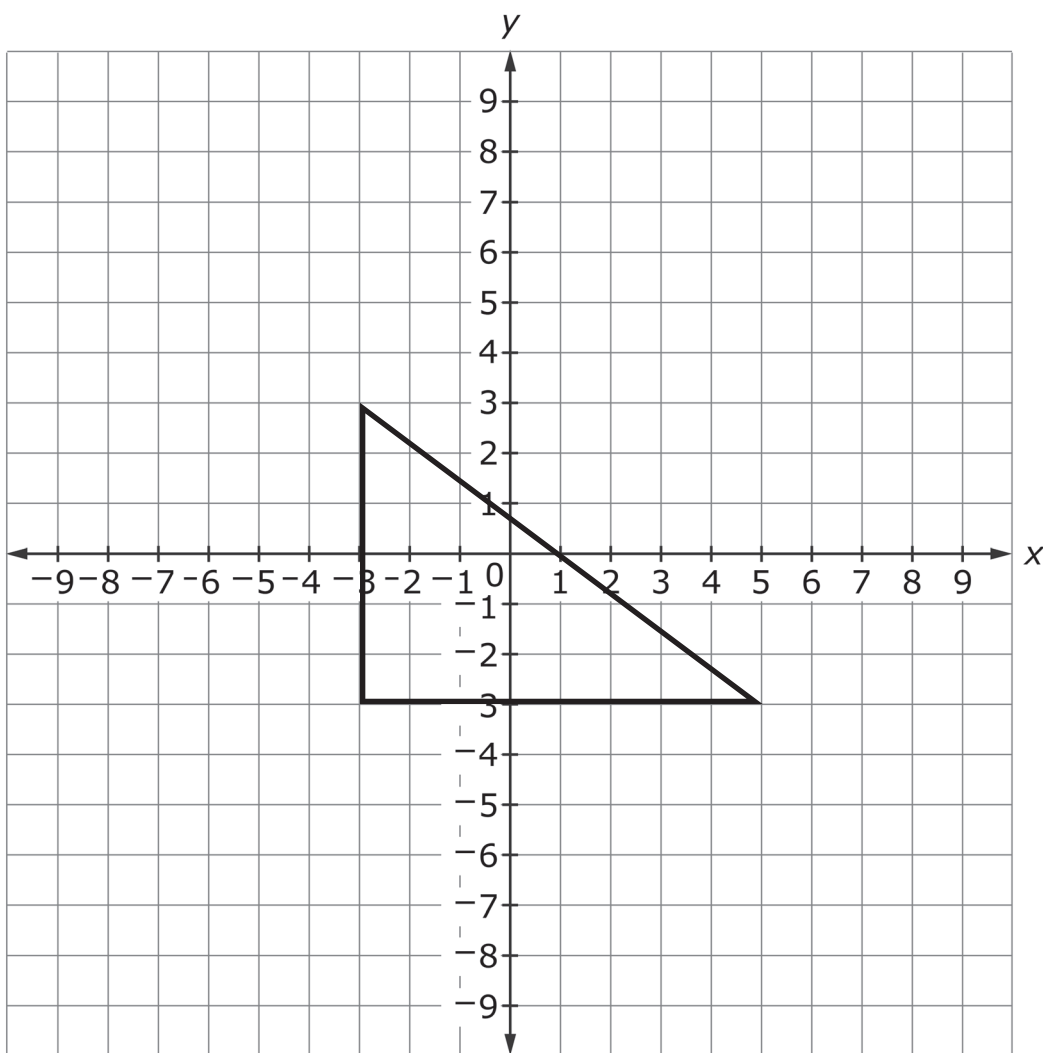
17. ☐ A ☐ B ☐ C ☒

18. ☐ A ☒ ☐ C ☐ D

19.



20. Part A



Part B: 24

21. (A) (B) ● (D)

Subpart 3 Practice Test Questions

22. (A) (B) (C) ●

23. (A) (B) ● (D)

24. (A) (B) (C) ●

25. (A) ● (C) (D) ●

26. (A) ● (C) (D)

27. (A) (B) ● (D)

- 28.** 6
- 29.** 555
- 30.** 150
- 31.** ☐ A ☒ B ☐ C ☐ D
- 32.** ☐ A ☐ B ☒ C ☐ D