

**LEAP**

# **Mathematics**

**2016 Practice Test**

**Grade 8**

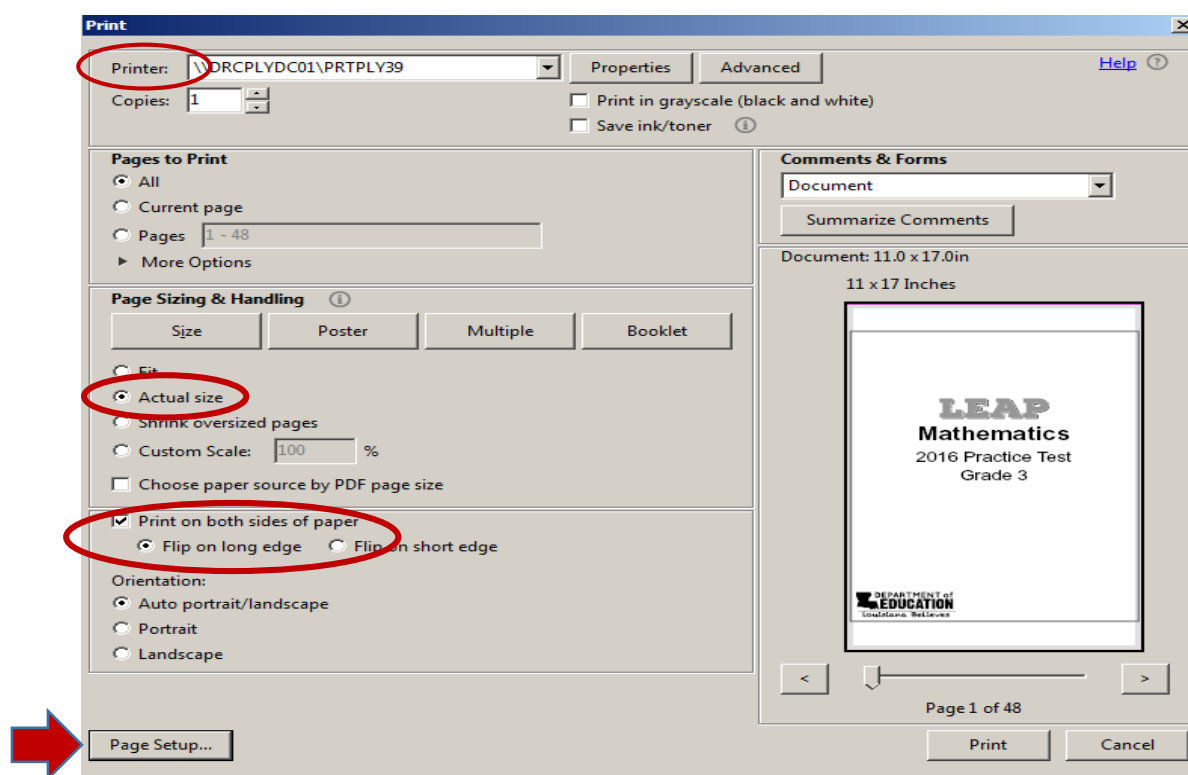


*Louisiana Believes*

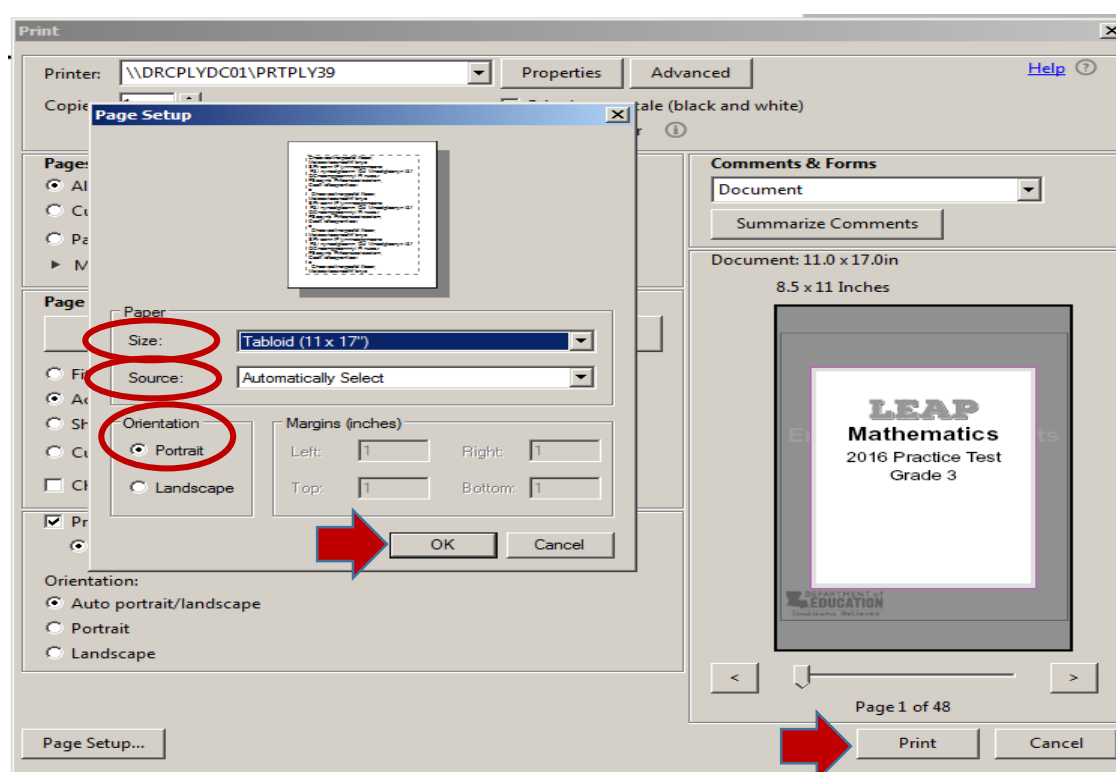
# INSTRUCTIONS FOR PRINTING THIS DOCUMENT

This document has been specially formatted to ensure it meets the specifications of the large-print accommodation. It must be printed on 11" x 17" paper. Please follow the instructions below to ensure the document prints correctly. Images are also provided to assist you.

1. Open the PDF file.
2. Click on "File", and on the drop-down menu that appears, select "Print". The Print window will pop up (see example below).
3. Make sure "Actual size" is selected
4. If your printer has the capacity to print double-sided, you may want to select the "Print on both sides of paper" option and the "Flip on long edge" option.
5. Then select the "Page Setup..." button in the lower left corner.



6. In the Page Setup screen (see below) you will want to make sure to select the correct size option in the Size dropdown menu. It may be called "11 x 17" or "Tabloid (11 x 17)" or something similar.
7. Allow the Source field to default to "Automatically Select".
8. Orientation must be set to "Portrait".
9. Then select the "OK" button to save your changes and close the Page Setup screen.
10. Finally, select the "Print" button.







# Session 1

## Directions:

Today, you will take Session 1 of the Grade 8 Mathematics Test. You will not be able to use a calculator in this session.

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely.

If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

**GO ON ►**

### Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
5. Do not fill in a circle under an unused box.
6. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
7. See below for examples on how to correctly complete an answer grid.

To answer  $-3$  in a question, fill in the answer grid as shown on the left in your Test Booklet.

	-	3				

To answer  $.75$  in a question, fill in the answer grid as shown on the right in your Test Booklet.

		.	7	5		

## Mathematics

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1. The area of a square tile is 36 square centimeters. What is the length of the tile?
  - Ⓐ 4 cm
  - Ⓑ 6 cm
  - Ⓒ 18 cm
  - Ⓓ 24 cm
  
2. Which decimal is the equivalent of  $\frac{6}{11}$ ?
  - Ⓐ  $0.18\overline{3}$
  - Ⓑ  $0.1\overline{83}$
  - Ⓒ  $0.5\overline{4}$
  - Ⓓ  $0.\overline{54}$

**GO ON ►**

3. A shape with an area of 14.5 square feet goes through the two transformations listed below.
- rotate  $90^\circ$  clockwise around its center
  - translate 8 units to the right

What is the area, in square feet, of the shape after the two transformations?

- Ⓐ 14.5
  - Ⓑ 22.5
  - Ⓒ 104.5
  - Ⓓ 116
4. The table below shows the prices for different brands and different numbers of tires at Bill's Tire Shop.

<b>Bill's Tire Shop</b>		
<b>Brand</b>	<b>Number of Tires</b>	<b>Price (\$)</b>
Brand A	1	120
Brand A	4	450
Brand B	1	140
Brand B	4	450

Bill graphs the number of tires sold,  $x$ , and the price,  $y$ . Which statement explains why Bill's graph is not a function?

- Ⓐ Each input has only one output.
- Ⓑ Each output has only one input.
- Ⓒ One input has more than one output.
- Ⓓ One output has more than one input.



5. Select **all** the equations that represent  $y$  as a linear function of  $x$ .

Ⓐ  $x = 2$

Ⓑ  $x = 2y$

Ⓒ  $x = y^2$

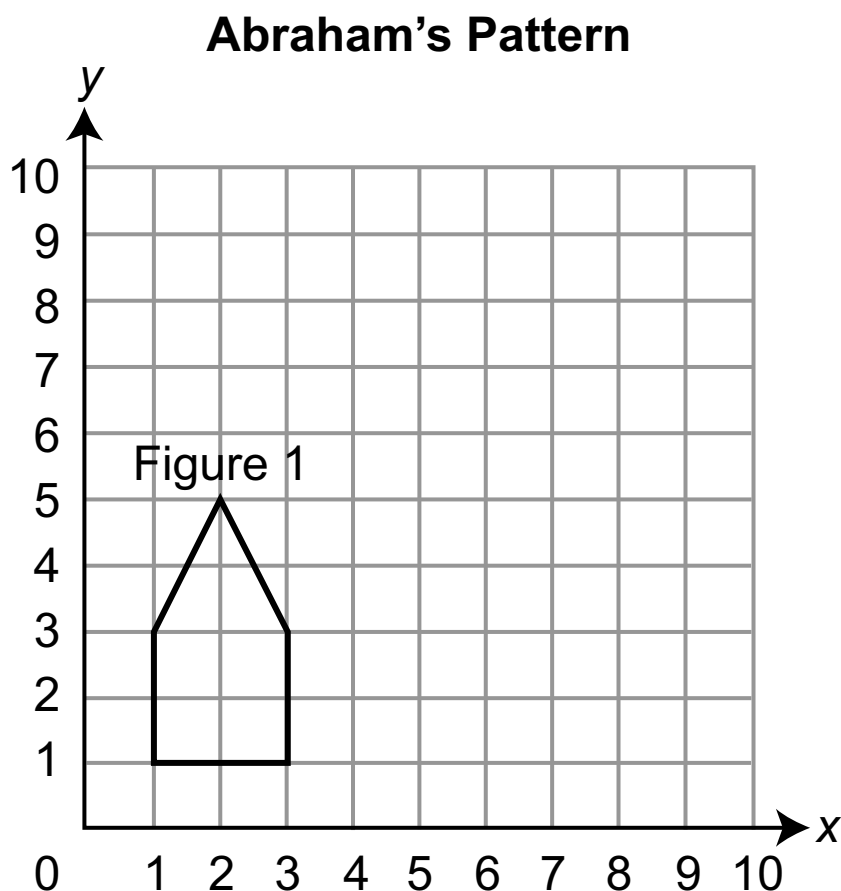
Ⓓ  $y = 2$

Ⓔ  $y = 2x$

Ⓕ  $y = x^2$

**GO ON ►**

6. Abraham draws a pattern. He starts his pattern by drawing Figure 1 as shown below.



He then rotates the figure  $180^\circ$  around the point  $(2, 3)$ , translates the figure 4 units to the right, and labels it Figure 2.

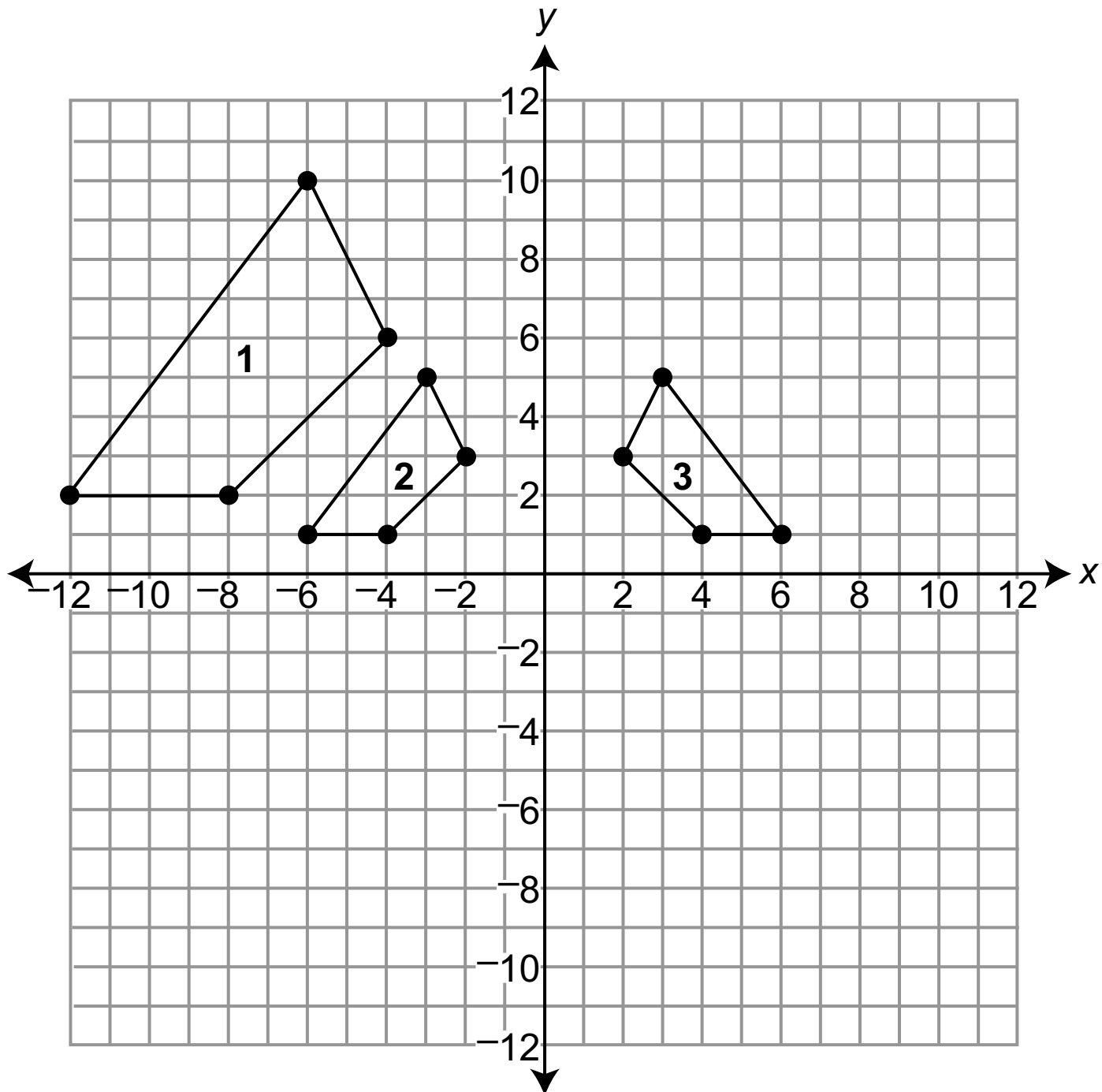
Which statement about the two figures **must** be true?

Select **all** that apply.

- Ⓐ Each figure has one pair of parallel line segments.
- Ⓑ The two figures have at least one point in common.
- Ⓒ The area of Figure 1 is less than the area of Figure 2.
- Ⓓ The figures lie in different quadrants of the coordinate plane.
- Ⓔ The acute angles in each figure are congruent to one another.
- Ⓕ The perimeter of Figure 1 is greater than the perimeter of Figure 2.

Use the information provided to answer Part A and Part B for question 7.

7. On the coordinate plane shown, Figure 1 is transformed into Figure 2, which is transformed into Figure 3. Figure 1 and Figure 3 are similar by a sequence of transformations.



**Part A**

What type of transformation was used to transform Figure 1 into Figure 2?

- Ⓐ dilation
- Ⓑ reflection
- Ⓒ rotation
- Ⓓ translation

**GO ON ►**

**Part B**

Which statement describes the transformation of Figure 2 into Figure 3?

- Ⓐ reflection across the  $x$ -axis
- Ⓑ reflection across the  $y$ -axis
- Ⓒ translation 4 units to the right
- Ⓓ translation 6 units to the right

**GO ON ►**

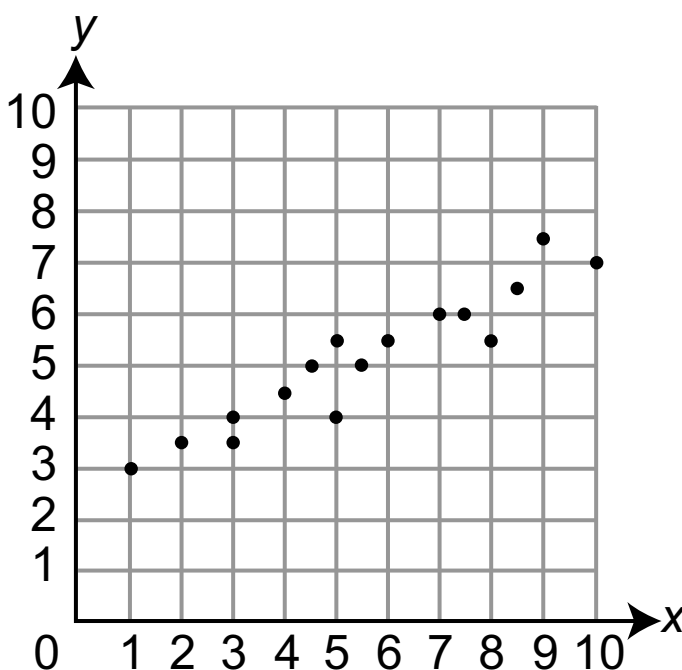
8. The length of the diagonal of a rectangle is  $\sqrt{181}$  inches.

Which statement describes the length of the diagonal?

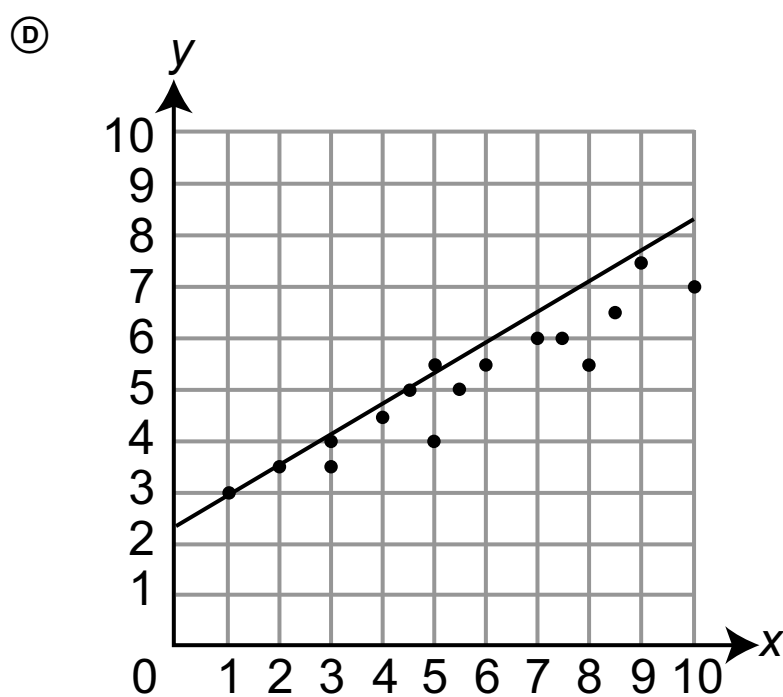
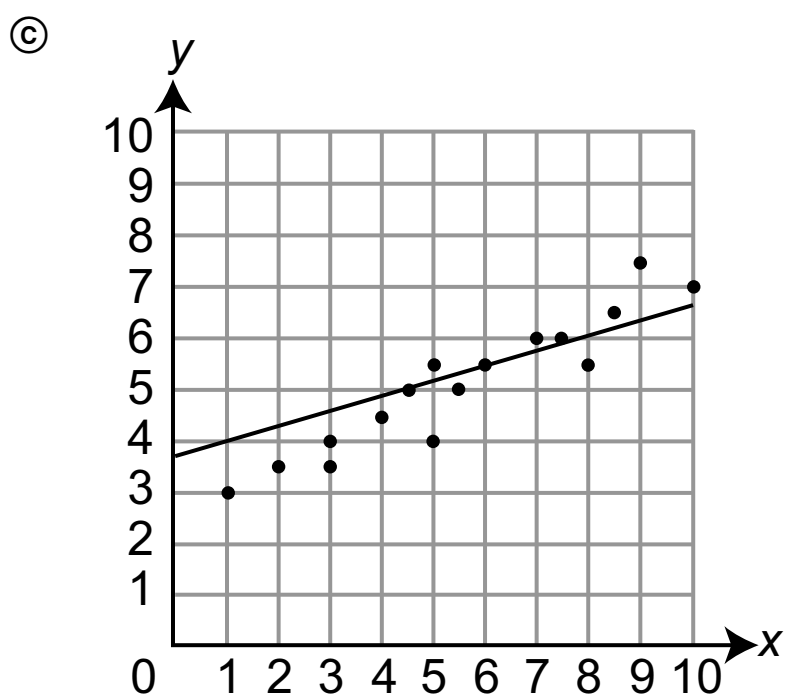
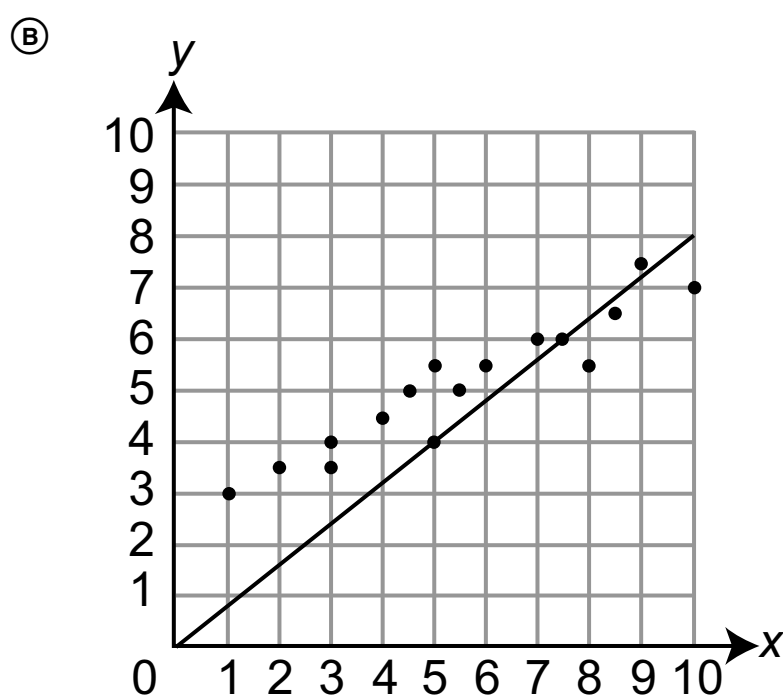
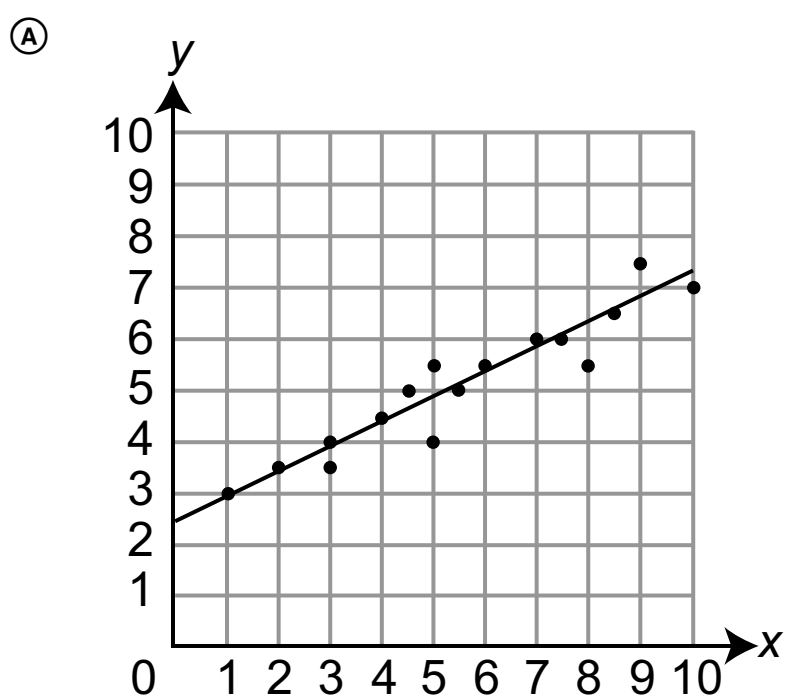
- Ⓐ The length is between 12 and 13 inches.
- Ⓑ The length is between 13 and 14 inches.
- Ⓒ The length is between 14 and 15 inches.
- Ⓓ The length is between 15 and 16 inches.

**GO ON ►**

9. A scatter plot is shown on the coordinate plane.



Which of these **most closely** approximates a line of best fit for the data in the scatter plot?



**GO ON ►**

## Mathematics

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10. Gary has a brother and a sister in college. He traveled  $1.6 \times 10^2$  miles to visit his sister. He traveled  $3.2 \times 10^3$  miles to visit his brother. The distance Gary traveled to visit his brother is how many times as much as the distance Gary traveled to visit his sister?

Enter your answer in the box.

⊖					
●	●	●	●	●	●
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

11. What is the solution of the system of equations shown below?

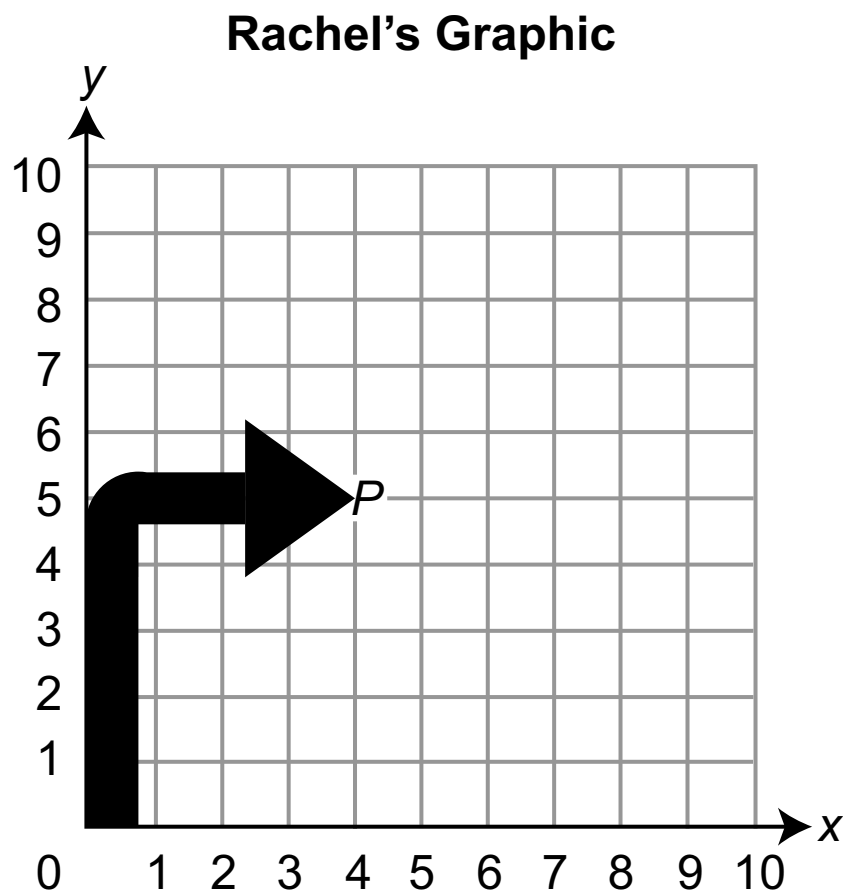
$$-2x + 3y = 15$$

$$2x + 3y = 15$$

- (A) (2, 3)  
(B) (0, 5)  
(C) (7.5, 10)  
(D) (3.75, 2.5)

**GO ON ►**

12. Rachel draws the graphic shown below in a computer program. She labels the tip of the arrow  $P$ .



She then uses the program to dilate the figure by a factor of 2. The dilation is centered at the origin. After the dilation, the tip of the arrow is labeled  $P'$ . Which ordered pair describes the location of  $P'$ ?

- Ⓐ (4, 10)
- Ⓑ (6, 7)
- Ⓒ (8, 10)
- Ⓓ (12, 15)



## Mathematics

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13. Consider the equation  $2(x + 2) = 2 + 2x$ . How many solutions does this equation have?
- Ⓐ 0 solutions
  - Ⓑ 1 solution
  - Ⓒ 2 solutions
  - Ⓓ infinitely many solutions
14. Erin designs packaging for a company. She draws a two-dimensional figure to represent the base of a small package. To represent the base of a large package, she performs the following steps on the original figure:
- First, she dilates it by a factor greater than 1, centered at the origin.
  - Then, she rotates it.
  - Finally, she dilates it by a factor less than 1, centered at the origin.

Which statement best describes the figure representing the base of the large package?

- Ⓐ It must be both similar and congruent to the figure representing the base of the small package.
- Ⓑ It must be similar and could be congruent to the figure representing the base of the small package.
- Ⓒ It could be similar and must be congruent to the figure representing the base of the small package.
- Ⓓ It cannot be similar or congruent to the figure representing the base of the small package.

**GO ON ►**

15. Which statement **best** describes the value of  $\sqrt{8}$ ?

- Ⓐ The value of  $\sqrt{8}$  is between 2 and 2.5.
- Ⓑ The value of  $\sqrt{8}$  is between 2.5 and 3.
- Ⓒ The value of  $\sqrt{8}$  is between 3 and 3.5.
- Ⓓ The value of  $\sqrt{8}$  is between 3.5 and 4.

16. Solve for  $x$ .

$$124.50 = 20(x + 4) + \frac{3}{4}x + 3$$

- Ⓐ 1.2
- Ⓑ 1.5
- Ⓒ 2
- Ⓓ 10

17. Which expressions are equivalent to  $3^4$ ?

Select **all** that apply.

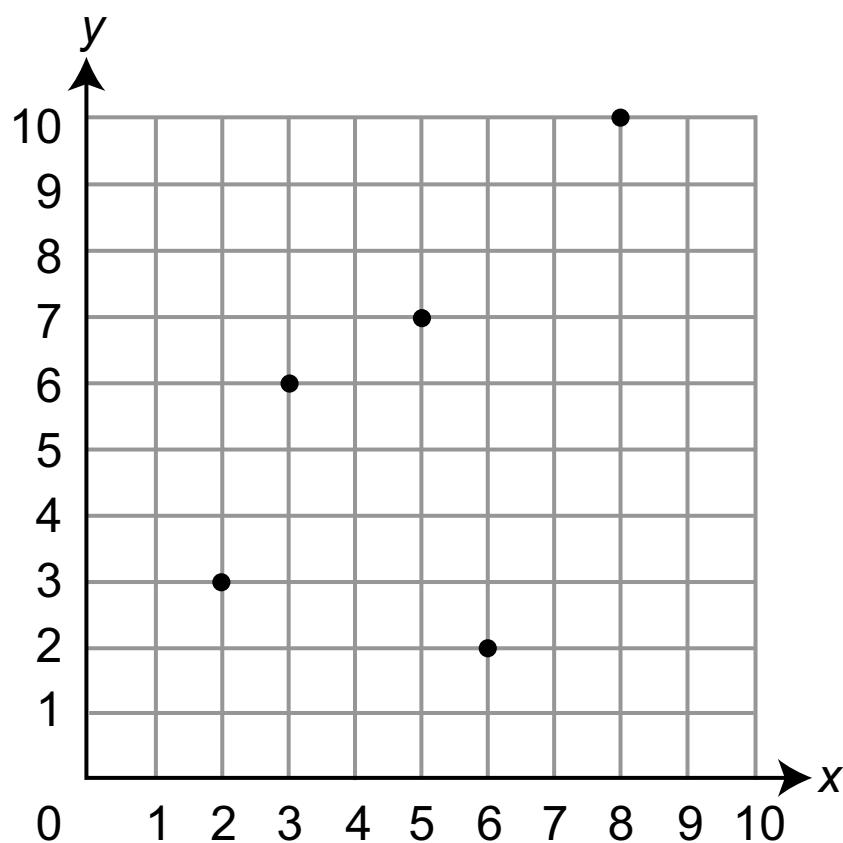
- Ⓐ  $3^2 + 3^2$
- Ⓑ  $3 \times 4$
- Ⓒ  $3^2 \times 3^2$
- Ⓓ  $(3^2)^2$
- Ⓔ  $4 \times 4 \times 4$
- Ⓕ  $(3^1)^4$

18. Jason plots three points on a coordinate plane and sees that they do not create a function. The three points he plots are  $(-2, 5)$ ,  $(-5, 9)$ , and  $(x, -3)$ . What is a possible value of  $x$  that makes Jason's three points not represent a function?

Enter your answer in the box.

⊖					
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0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

19. Several points of a function are plotted on the coordinate plane below.



Select **all** the points that could be added to the graph so that it still represents a function.


- Ⓐ (0, 3)
  - Ⓑ (2, 5)
  - Ⓒ (4, 6)
  - Ⓓ (6, 4)
  - Ⓔ (10, 10)
20. The erosion rate along a section of the coast is approximately 3 feet per year. Which of these **best** approximates this rate of erosion?
- Ⓐ  $9.9 \times 10^{-2}$  inches per day
  - Ⓑ  $9.9 \times 10^{-2}$  inches per month
  - Ⓒ  $9.9 \times 10^{-2}$  feet per day
  - Ⓓ  $9.9 \times 10^{-2}$  feet per month





# Session 2 (Calculator)

## Directions:

Today, you will take Session 2 of the Grade 8 Mathematics Test. **You will be able to use a calculator (  ) in this session.**

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely.

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**GO ON ►**



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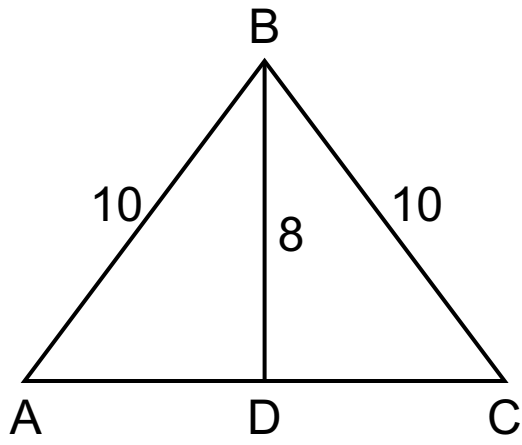
-	3				
●					
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
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○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○

To answer  $.75$  in a question, fill in the answer grid as shown on the right in your Test Booklet.

	.	7	5		
-					
○	○	○	○	○	○
○	○	○	○	○	○
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○	○	○	○	○	○
○	○	○	○	○	○



21. In  $\triangle ABC$ ,  $\overline{BD}$  is perpendicular to  $\overline{AC}$ . The dimensions are shown in centimeters.



What is the length, in centimeters, of  $\overline{AC}$ ?

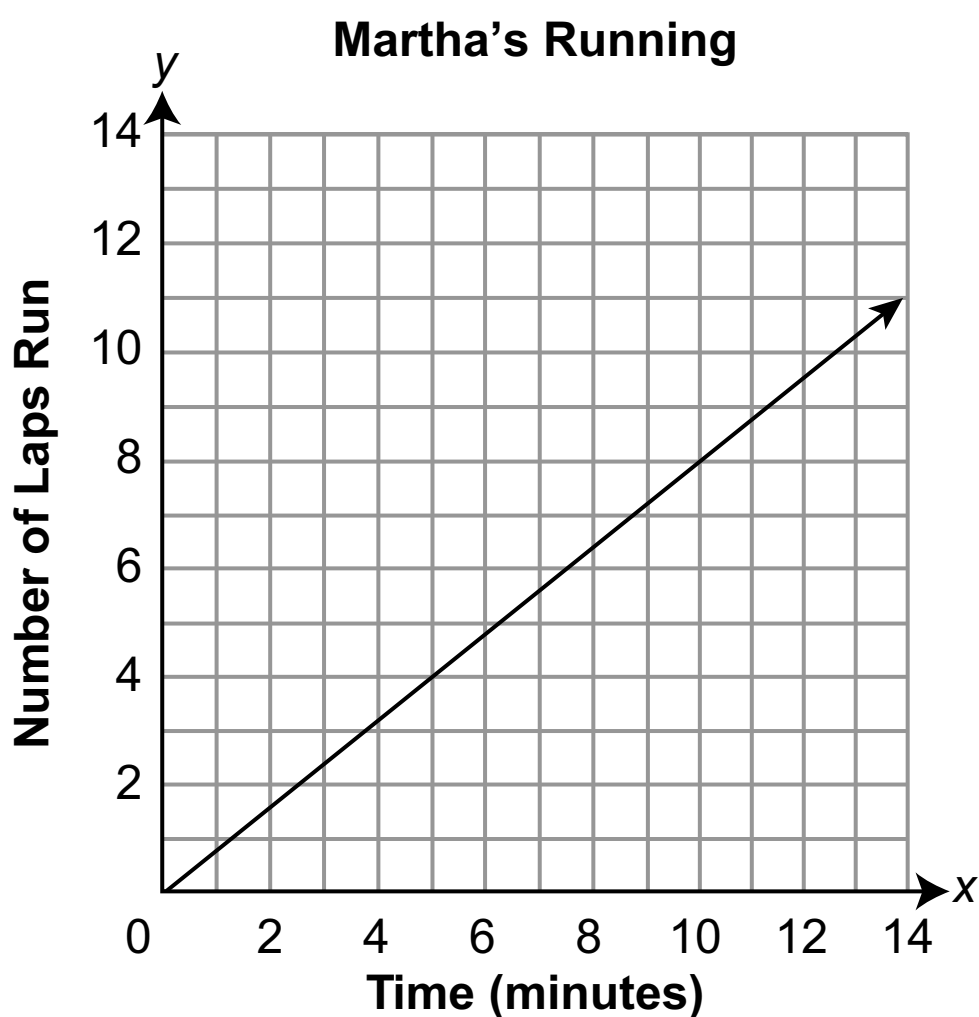
Enter your answer in the box.

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0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

GO ON ►



22. Glenn and Martha run track for their school. Glenn can run  $\frac{3}{4}$  lap in 1 minute. The graph below shows the number of laps Martha can run over time.



Glenn and Martha decide to run a 20-lap race. If Glenn's and Martha's running rates remain constant for all 20 laps, which pair of statements about the race is correct?

- Ⓐ Martha will win the race. She runs at a pace that is  $\frac{1}{20}$  lap per minute faster than Glenn.
- Ⓑ Martha will win the race. She runs at a pace that is  $\frac{2}{25}$  lap per minute faster than Glenn.
- Ⓒ Glenn will win the race. He runs at a pace that is  $\frac{1}{20}$  lap per minute faster than Martha.
- Ⓓ Glenn will win the race. He runs at a pace that is  $\frac{2}{25}$  lap per minute faster than Martha.





Use the information provided to answer Part A and Part B for question 23.

23. A tank of water was drained at a constant rate. The table shows the number of gallons of water left in the tank after being drained for two amounts of time.

Draining Time (minutes)	Water in Tank (gallons)
10	450
30	330

**Part A**

What is the rate at which the water was drained from the tank?

- Ⓐ 6 gallons of water per minute
- Ⓑ 11 gallons of water per minute
- Ⓒ 45 gallons of water per minute
- Ⓓ 120 gallons of water per minute

**Part B**

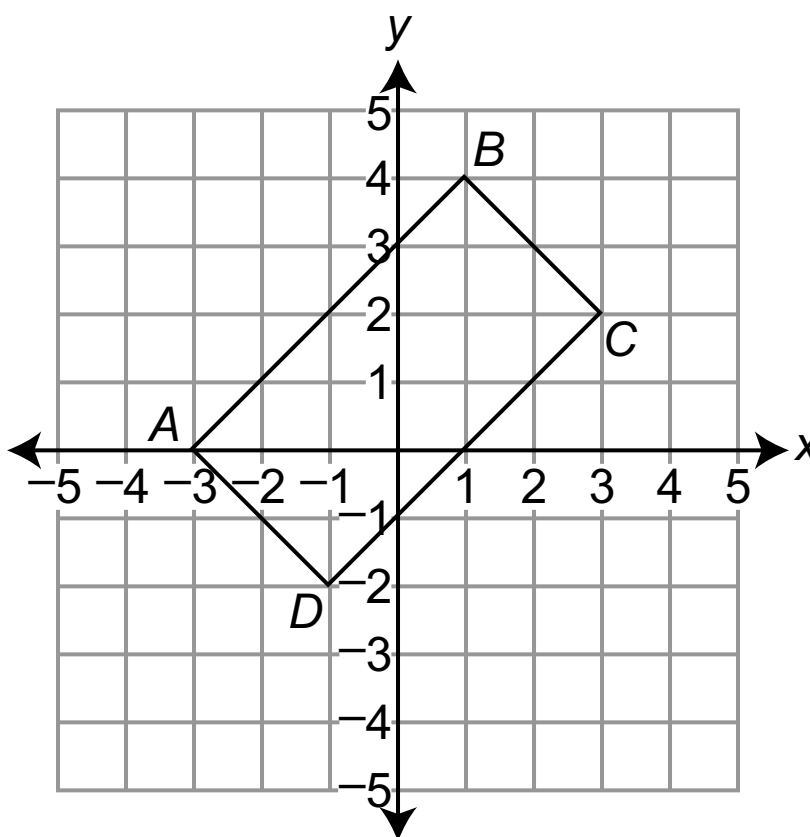
What was the total amount of water in the tank before it was drained?

- Ⓐ 450 gallons
- Ⓑ 510 gallons
- Ⓒ 560 gallons
- Ⓓ 570 gallons

**GO ON ►**

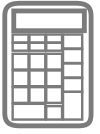


24. Rectangle  $ABCD$  is shown.

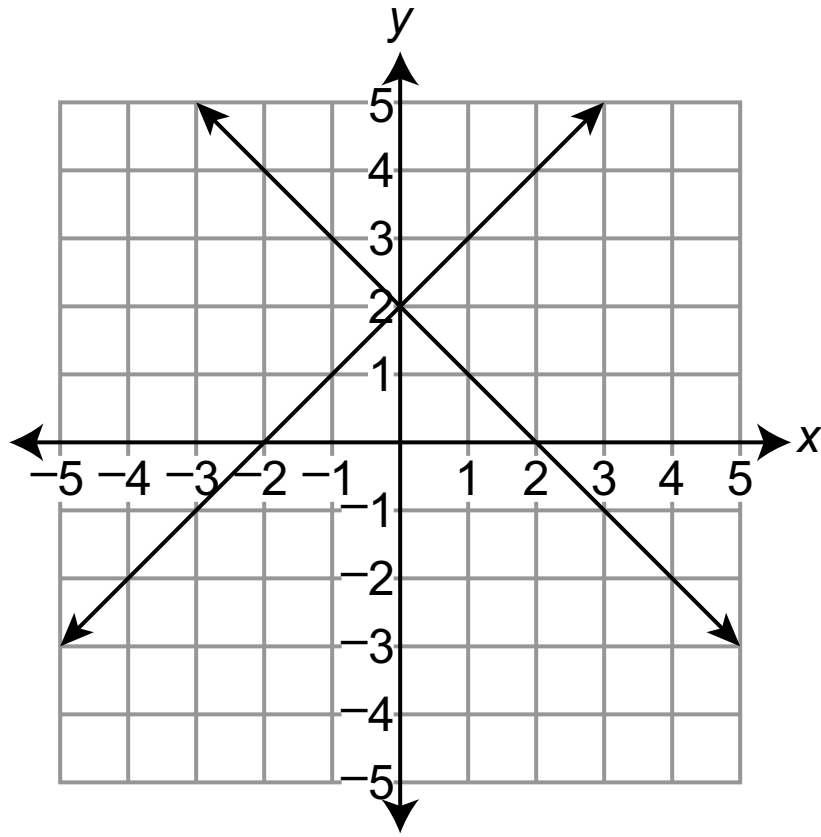


What is the length of side  $AB$ ?

- Ⓐ  $\sqrt{4}$  units
- Ⓑ 4 units
- Ⓒ  $\sqrt{32}$  units
- Ⓓ 32 units



25. The graph of a system of two linear equations is shown.



How many solutions does the system of equations have?

- Ⓐ 0 solutions
- Ⓑ 1 solution
- Ⓒ 3 solutions
- Ⓓ infinitely many solutions



26. The table shows the results of a random survey of students in grade 7 and grade 8. Every student surveyed gave a response. Each student was asked if he or she exercised less than 5 hours last week or 5 or more hours last week.

	Less than 5 Hours	5 or More Hours
Grade 7 Students	49	63
Grade 8 Students	58	51

Based on the results of the survey, which statements are true?

Select **each** correct statement.

- Ⓐ More grade 8 students were surveyed than grade 7 students.
- Ⓑ A total of 221 students were surveyed.
- Ⓒ Less than 50% of the grade 8 students surveyed exercised 5 or more hours last week.
- Ⓓ More than 50% of the students surveyed exercised less than 5 hours last week.
- Ⓔ A total of 107 grade 7 students were surveyed.



27. Two utility companies sell electricity in units of kilowatt-hours. The cost of electricity for company P is shown in the table. The cost of electricity for company M can be found by using the equation shown, where  $y$  represents the total cost in dollars for  $x$  kilowatt-hours of electricity.

Electricity Costs		
Company P		Company M
Number of Kilowatt-hours	Total Cost (dollars)	$y = 0.15x$
1,250	150.00	
1,650	198.00	

- Use the information provided to find the unit rate, in dollars per kilowatt-hour, for each company. Show your work or explain your answers.
- Find the total cost, in dollars, of buying 2,375 kilowatt-hours of electricity from the **least** expensive company.

Enter your answers and your work or explanation in the box provided.



28. Two membership levels are offered at a local bookstore.

**Bookstore Memberships**

Membership Level	Entry Fee	Cost per Book
silver	\$40	\$19.25
gold	\$69.25	\$16

How many books would need to be purchased from each membership so that the two membership levels cost the same amount?

Enter your answer in the box.

⊖					
●	●	●	●	●	●
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

**GO ON ►**



Use the information provided to answer Part A and Part B for question 29.

29. Eric planted a seedling in his garden and recorded its height each week. The equation shown can be used to estimate the height,  $h$ , in inches, of the seedling by the end of each week,  $w$ , after it was planted.

$$h = \frac{3}{4}w + \frac{9}{4}$$

**Part A**

What does the slope of the graph of the equation  $h = \frac{3}{4}w + \frac{9}{4}$  represent?

- (A) the height, in inches, of the seedling after  $w$  weeks
- (B) the height, in inches, of the seedling when Eric first planted it
- (C) the increase in the height, in inches, of the seedling each week
- (D) the total increase in the height, in inches, of the seedling after  $w$  weeks

**Part B**

The equation  $h = \frac{3}{4}w + \frac{9}{4}$  estimates the height of the seedling to be 8.25 inches after how many weeks?

Enter your answer in the box.

-					
	•	•	•	•	•
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9

**GO ON ►**



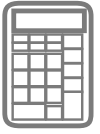
30. Determine whether the equation has no solution, one solution, or infinitely many solutions.

$$-2(11 - 12x) = -4(1 - 6x)$$

Show each step of your work. Explain your conclusion.

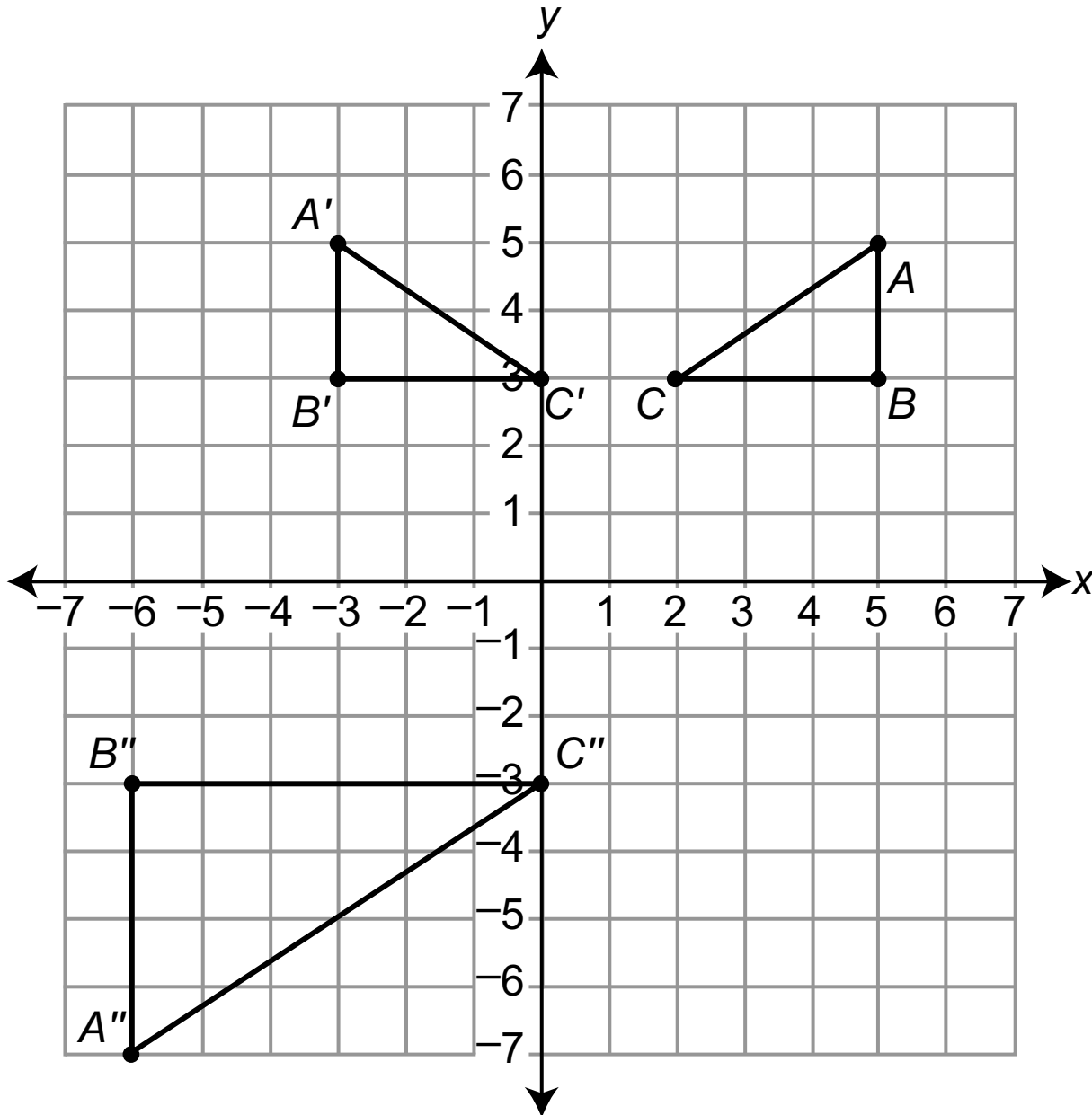
Enter your answer, your work, and your explanation in the box provided.





Use the information provided to answer Part A and Part B for question 31.

31. In the coordinate plane shown, triangle  $ABC$  is congruent to triangle  $A'B'C'$ . Triangle  $A'B'C'$  is similar to triangle  $A''B''C''$ .



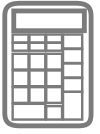
GO ON ►

**Part A**

Describe a single transformation that shows that triangle  $A'B'C'$  is congruent to triangle  $ABC$ . Include all the necessary information to complete the transformation.

Enter your description in the box provided.

**GO ON ►**



**Part B**

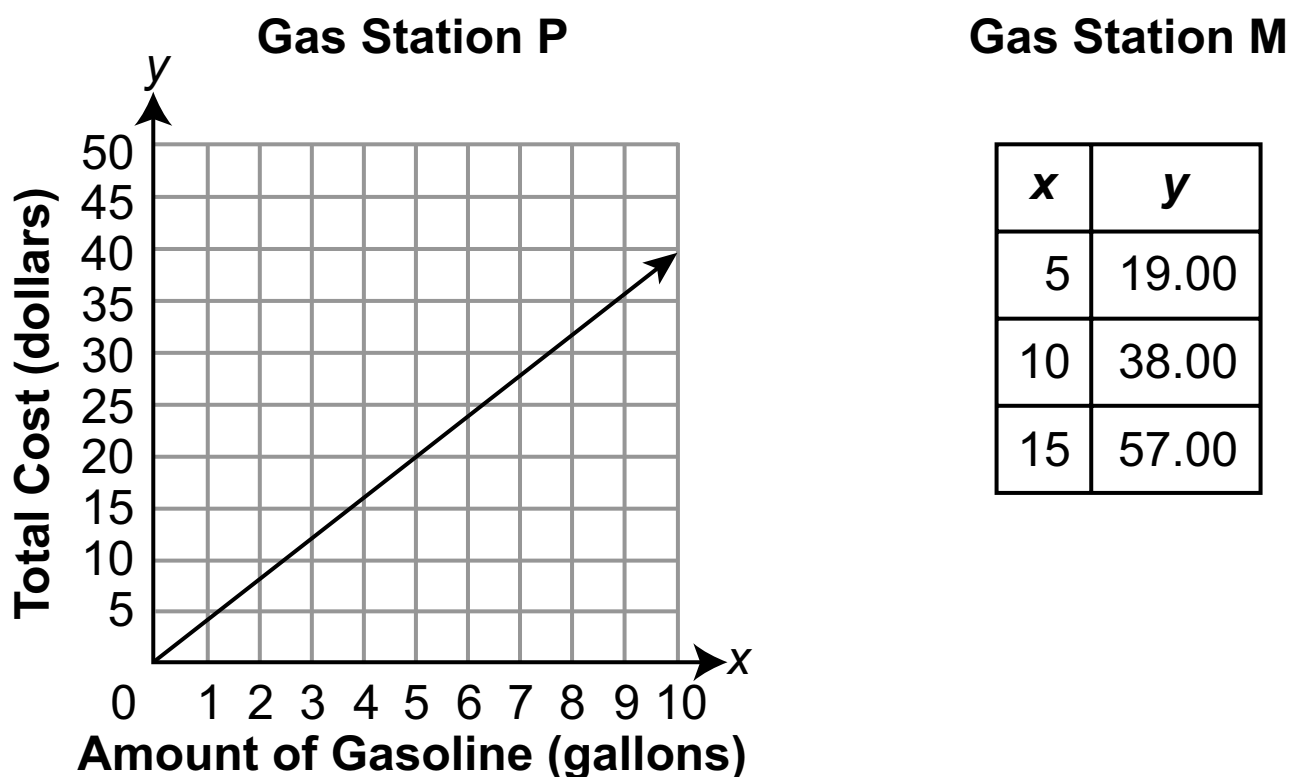
Describe a sequence of transformations that shows that triangle  $A''B''C''$  is similar to triangle  $A'B'C'$ . Include all the necessary information to complete each transformation.

Enter your description in the box provided.

**GO ON ►**



32. The graph and table show the amount of gasoline in gallons,  $x$ , and total cost in dollars,  $y$ , of gasoline at two gas stations.



Use the unit price of gasoline at both gas stations to determine which gas station charges more for gasoline (gallons). Be sure to include the unit prices in your answer. Show or explain your work.


Enter your answer and your work or explanation in the box provided.





# Session 3 (Calculator)

## Directions:

Today, you will take Session 3 of the Grade 8 Mathematics Test. **You will be able to use a calculator (  ) in this session.**

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely.

If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

**GO ON ►**



### Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
5. Do not fill in a circle under an unused box.
6. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
7. See below for examples on how to correctly complete an answer grid.

To answer  $-3$  in a question, fill in the answer grid as shown on the left in your Test Booklet.

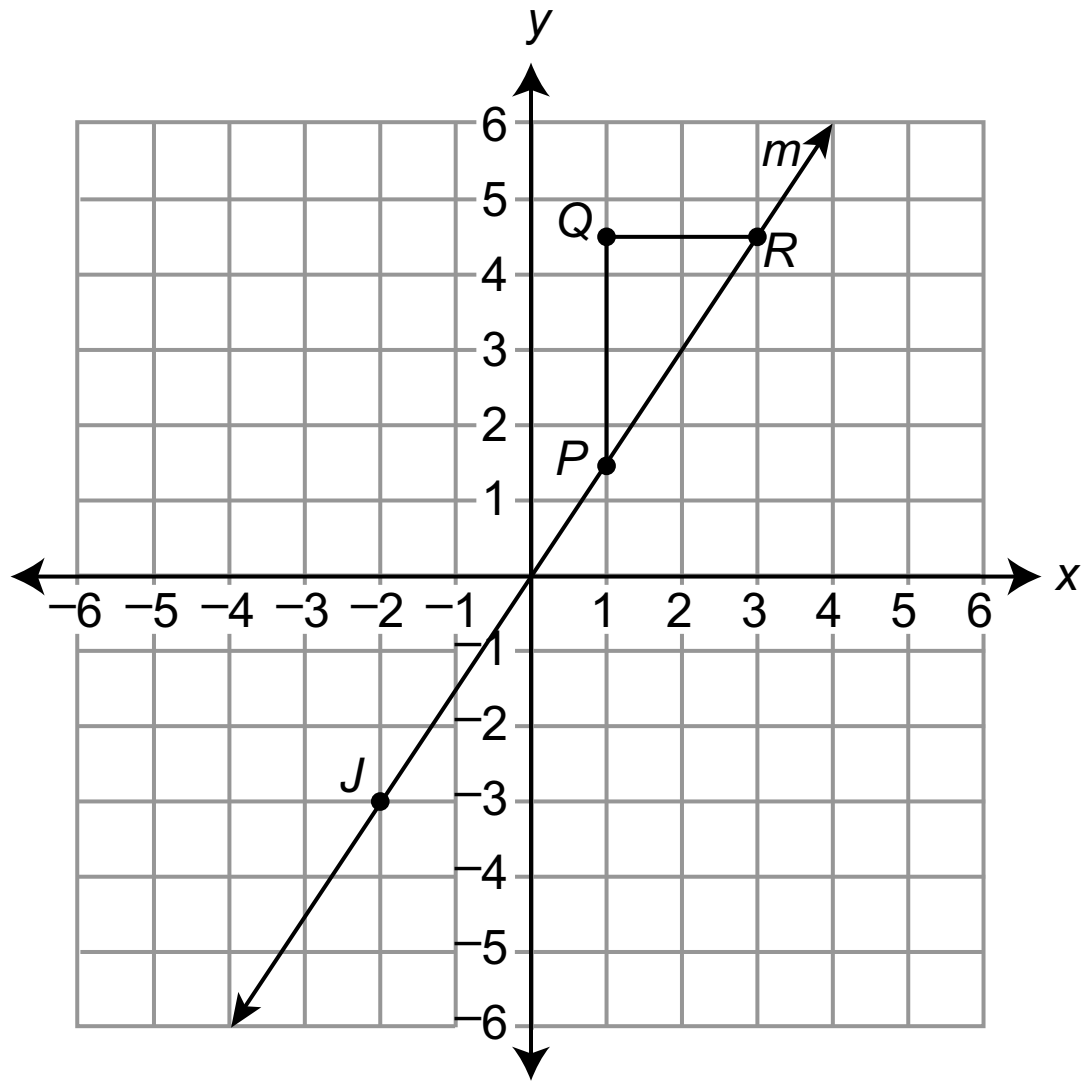
-	3				
●					
	○	○	○	○	○
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	●	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9

To answer  $.75$  in a question, fill in the answer grid as shown on the right in your Test Booklet.

	.	7	5		
-					
	●	○	○	○	○
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	●	5	5
	6	6	6	6	6
	7	●	7	7	7
	8	8	8	8	8
	9	9	9	9	9



33. Line  $m$  and triangle  $PQR$  are shown on the graph below.



Greg is creating triangle  $JKL$  to be similar to triangle  $PQR$ . Each side of triangle  $JKL$  is parallel to one side of triangle  $PQR$ .

Select **all** the points that could be the location of point  $L$ .

- Ⓐ  $(-2, -0)$
- Ⓑ  $(-1, -1.5)$
- Ⓒ  $(0, 0)$
- Ⓓ  $(2, 3)$
- Ⓔ  $(2.5, 3.5)$
- Ⓕ  $(5.5, 8)$



34. A survey of 7th and 8th grade students asked whether they were in favor of or against school uniforms. The two-way table shows the results.

**Survey Results**

Grade	Number of Students		
	In Favor	Against	Total
7th	48	64	112
8th	68	70	138
<b>Total</b>	116	134	250

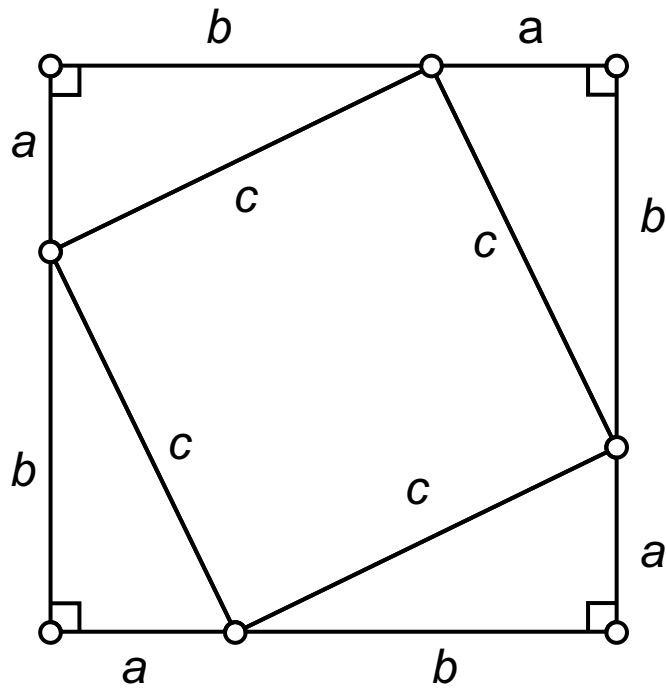
To the nearest tenth of a percent, what percent of the 7th grade students were in favor of wearing school uniforms?

- Ⓐ 19.2%
- Ⓑ 41.3%
- Ⓒ 42.9%
- Ⓓ 57.1%





35. Shaun is proving the Pythagorean Theorem. He has drawn the figure shown below as part of his proof.

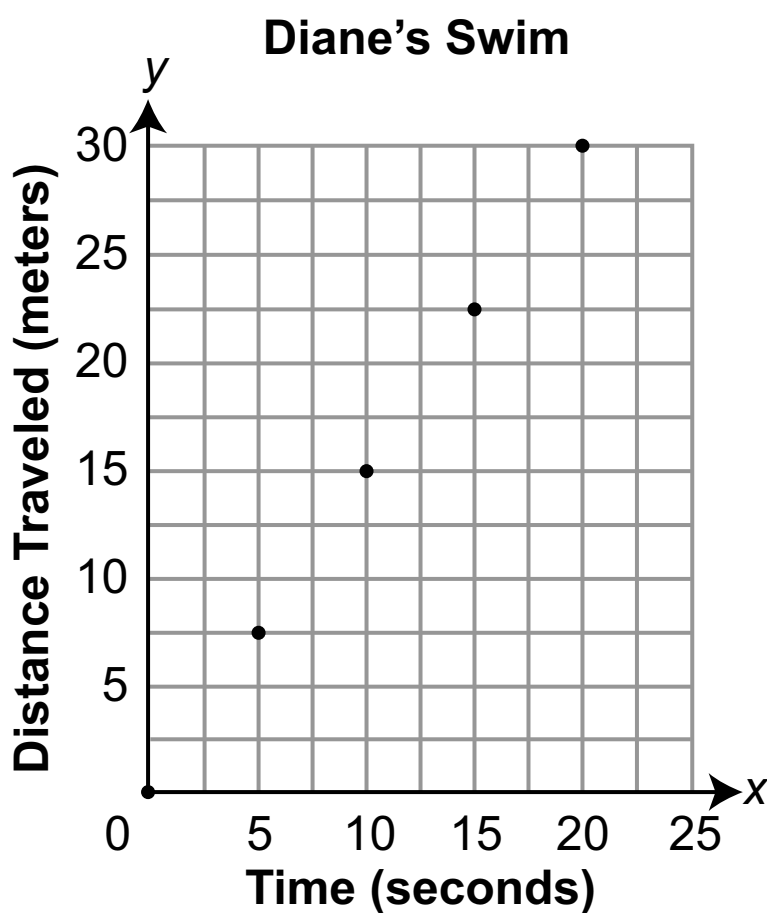


He wants to show that the area of the large square is equal to the sum of the areas of the small triangles and the small square. Which equation should Shaun write to represent this equality?

- Ⓐ  $2ab + c^2 = (a + b)^2$
- Ⓑ  $2ab + c^2 = a^2 + b^2$
- Ⓒ  $4ab + c^2 = (a + b)^2$
- Ⓓ  $4ab + c^2 = a^2 + b^2$



36. Diane and Rick are each swimming a 150-meter race. Each swims at a constant rate throughout the whole race. The graph and table below show the distances Diane and Rick have each traveled after different numbers of seconds.



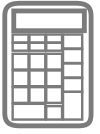
**Rick's Swim**

Time (seconds)	Distance Traveled (meters)
10	12.5
15	18.75
20	25

Based on the rates in the graph and the table, what is the difference, in seconds, between Diane's total race time and Rick's total race time?

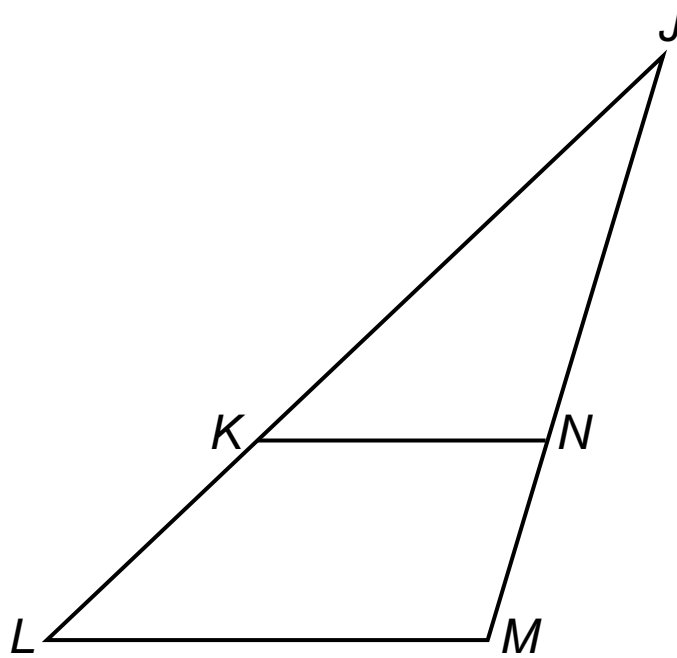
Enter your answer in the box.

⊖					
	⊙	⊙	⊙	⊙	⊙
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9



Use the information provided to answer Part A and Part B for question 37.

37. In the figure shown,  $\overline{KN}$  is parallel to  $\overline{LM}$ .



**Part A**

When comparing  $\triangle KJN$  and  $\triangle LJM$ , Tara states that  $\angle KJN$  and  $\angle LJM$  are congruent. Explain why Tara's statement is correct.

Enter your explanation in the box provided.

**GO ON ►**

**Part B**

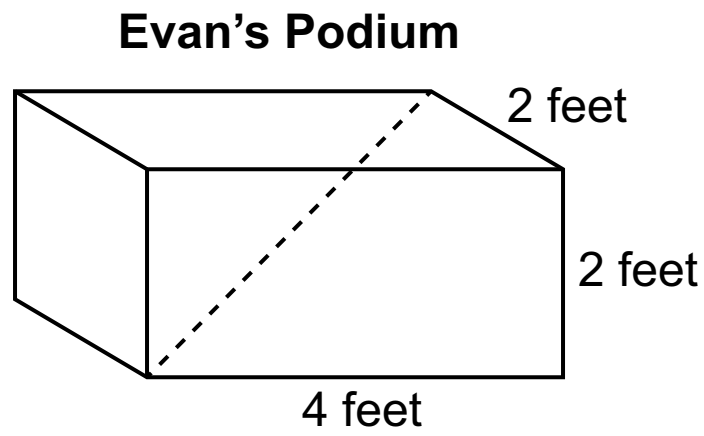
Tara wants to prove that a second pair of corresponding angles from  $\triangle KJN$  and  $\triangle LJM$  are congruent. Determine a second pair of corresponding angles from  $\triangle KJN$  and  $\triangle LJM$  that are congruent. Then explain how you know that the two angles are congruent.

Enter your answer and your explanation in the box provided.

**GO ON ►**



38. Evan is making a podium in the shape of a rectangular prism. He puts a diagonal brace from the upper back corner to the lower front corner of the podium, as represented by the dashed line in the figure below.



What is the approximate length of the diagonal brace, rounded to the nearest tenth of a foot?

- (A) 2.4
- (B) 2.8
- (C) 4.5
- (D) 4.9



39. A tutor schedules either 30-minute sessions or 60-minute sessions with her students. Last week, the tutor gave 8 sessions which lasted for a total of 7 hours. How many 60-minute sessions did the tutor give last week?

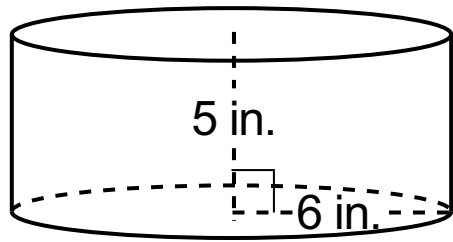
Enter your answer in the box.

-					
•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

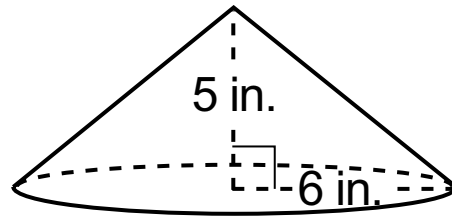
**GO ON ►**



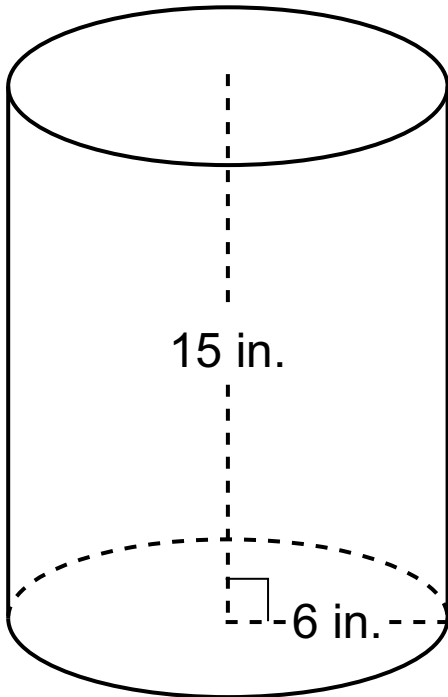
Consider the figures shown to answer Part A and Part B for question 40.



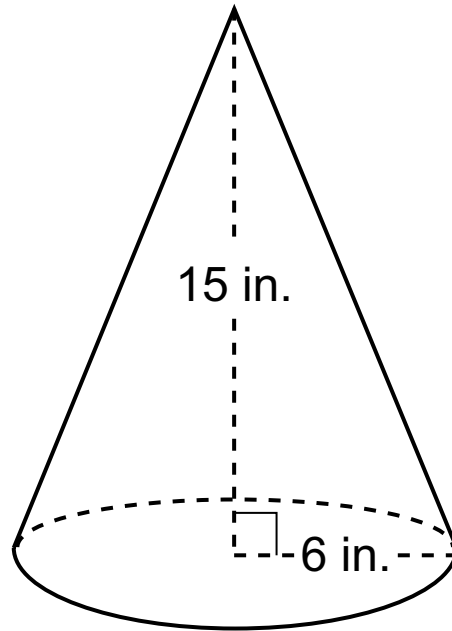
Cylinder #1



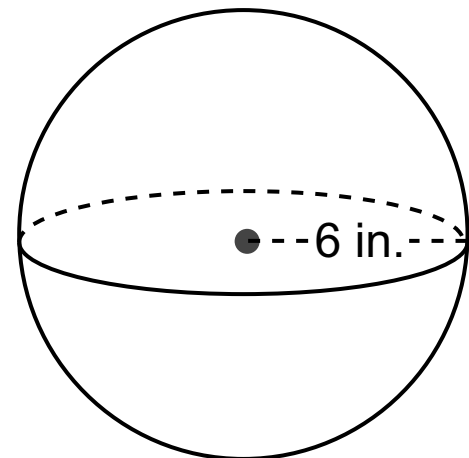
Cone #1



Cylinder #2



Cone #2



Sphere

40. **Part A**

Which figures have a volume greater than 600 cubic inches?

Select **all** that apply.

- Ⓐ Cylinder #1
- Ⓑ Cone #1
- Ⓒ Cylinder #2
- Ⓓ Cone #2
- Ⓔ Sphere

**GO ON ►**



**Part B**

How many times greater is the volume of the Sphere than the volume of Cone #1?  
Round your answer to the nearest tenth.

Enter your answer in the box.

-					
	●	●	●	●	●
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9

**GO ON ►**





Use the information provided to answer Part A and Part B for question 41.

41. The average price per gallon of gasoline in the state of California is given for 4 different dates.

**Gasoline Price Data**

<b>Date</b>	<b>Average Price per Gallon (dollars)</b>
January 1998	1.291
January 2000	1.354
March 2011	3.874
March 2013	4.069

**Part A**

A student claims that the percent increase in the average price per gallon for the two-year period from 2011 to 2013 was about the same as the percent increase for the two-year period from 1998 to 2000. Provide work or an explanation to justify whether or not the student's claim is correct.

Enter your answer and your work or explanation in the box provided.

**GO ON ►**

**Part B**

In March 2011, a California newspaper predicted that the price of gasoline in two years would be \$4.10. The newspaper claimed that the prediction would be within 2% of the actual price of gasoline in March 2013. Given the data in the table, determine the percent error of the prediction. Was the newspaper's claim correct or incorrect? Provide work or an explanation to justify your answer.

Enter your answers and your work or explanation in the box provided.

**GO ON ►**



Use the information provided to answer Part A through Part C for question 42.

42. A bakery uses a muffin recipe that uses  $\frac{1}{2}$  cup of milk for every batch of 12 muffins.

**Part A**

Based on the recipe, which statement is true?

Select **each** correct answer.

- Ⓐ  $\frac{1}{24}$  cup of milk is used to make each muffin.
- Ⓑ  $\frac{1}{12}$  cup of milk is used to make each muffin.
- Ⓒ  $\frac{1}{6}$  cup of milk is used to make each muffin.
- Ⓓ 1 cup of milk is used to make every 6 muffins.
- Ⓔ 1 cup of milk is used to make every 12 muffins.
- Ⓕ 1 cup of milk is used to make every 24 muffins.

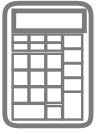
**GO ON ►**

**Part B**

How many batches of 12 muffins can be made using one **gallon** of milk? Show your work or explain how you found your answer.

Enter your answer and your work or explanation in the box provided.

**GO ON ►**



**Part C**

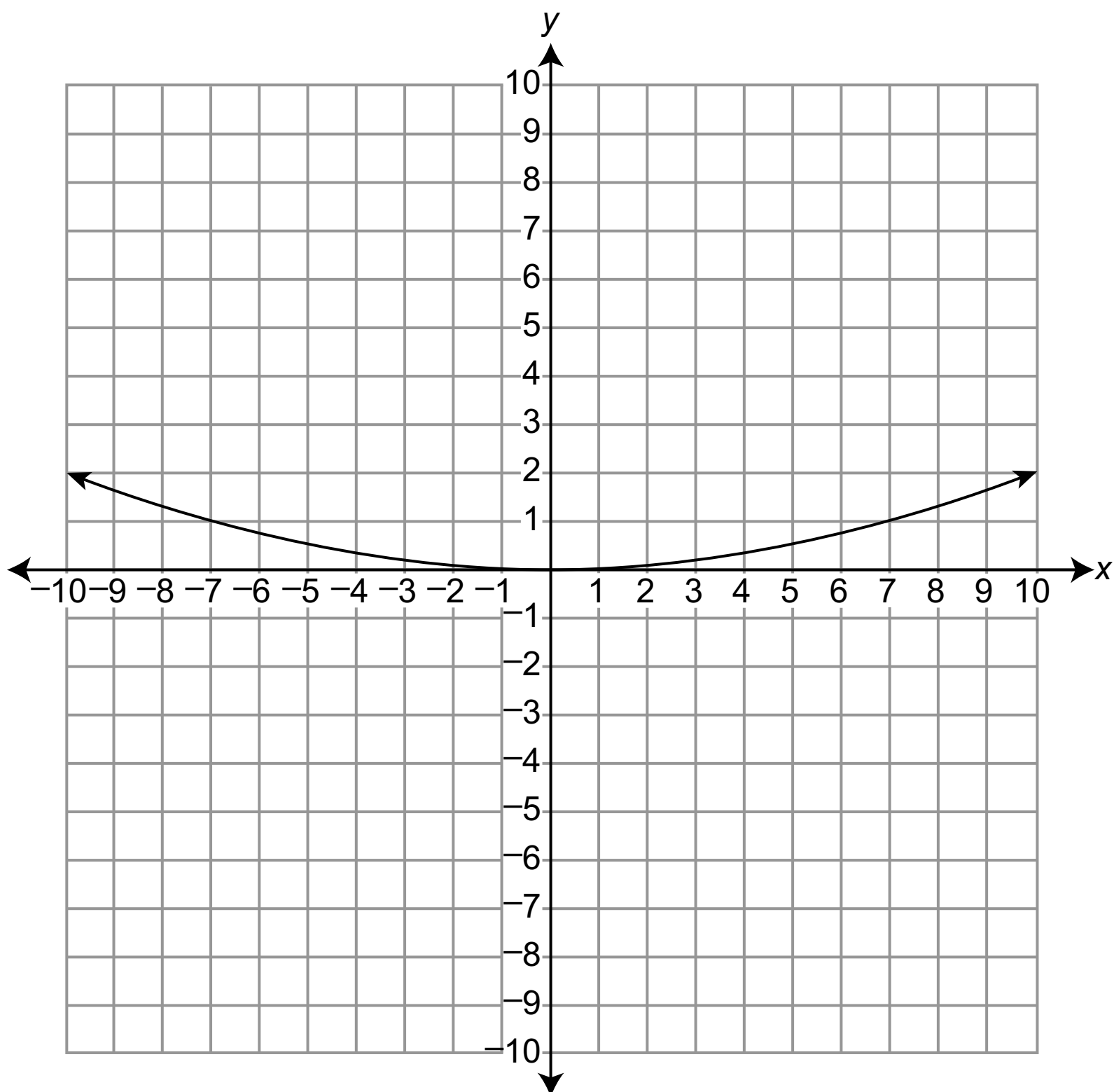
The bakery makes 96 muffins every day. How many total gallons of milk are needed to make 96 muffins every day for 30 days? Show your work or explain how you found your answer.

Enter your answer and your work or explanation in the box provided.

**GO ON ►**



43. The graph below shows the function relating two quantities,  $x$  and  $y$ .



Which description of the function is correct?

- Ⓐ The function is linear.
- Ⓑ The function is nonlinear.
- Ⓒ The function is linear for  $x < 0$  and nonlinear for  $x > 0$ .
- Ⓓ The function is nonlinear for  $x < 0$  and linear for  $x > 0$ .



## **STATE BOARD OF ELEMENTARY AND SECONDARY EDUCATION TEST SECURITY POLICY<sup>1</sup>**

The State Board of Elementary and Secondary Education approved a Test Security Policy on December 10, 1998. This has been periodically revised.

The Board of Elementary and Secondary Education holds the test security policy to be of utmost importance and deems any violation of test security to be serious.

The State Superintendent of Education may disallow test results that may have been achieved in a manner that is in violation of test security.

In cases in which test results are not accepted because of a breach of test security or action by the Louisiana Department of Education, any programmatic, evaluative, or graduation criteria dependent upon the data shall be deemed not to have been met.

Any teachers or other school personnel who breach test security or allow breaches in test security shall be disciplined in accordance with the provisions of R.S. 17:416 et seq., R.S. 17:441 et seq., R.S. 17:81.6 et seq., policy and regulations adopted by the Board of Elementary and Secondary Education, and any and all laws that may be enacted by the Louisiana Legislature.

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<sup>1</sup> Excerpts from *Bulletin 118*

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**LEAP**