Smarter Balanced Assessment Consortium:

Practice Test Scoring Guide

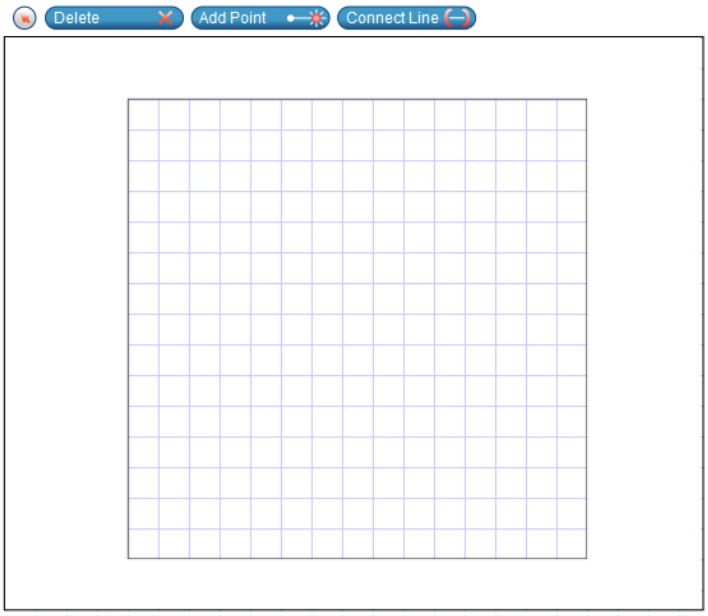
Grade 8

Published July 1, 2013

Prepared by the American Institutes for Research®

759

On the grid provided, draw a right triangle with whole number side lengths and a hypotenuse of 10 units. The length of the side of each square is one unit.



For this item, a full-credit response (1 point) includes:

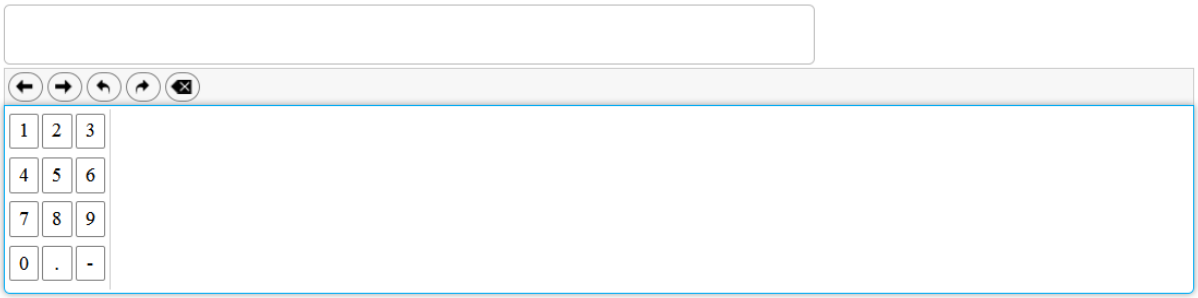
- a right triangle with leg lengths of 6 units and 8 units and a hypotenuse of 10 units

778

A square, with side length s, has an area of 324 square centimeters. This equation shows the area of the square.

$s^2 = 324$

What is the side length of the square in centimeters?



For this item, a full-credit response (1 point) includes:

- the value 18

Six friends are going to buy pizza. Their choices are to buy 2 medium 10-inch diameter pizzas for $7.00 each, or 1 large 14-inch diameter pizza for $15.00. Both prices include tax and tip.

The friends agree that their best choice is the one that gives them the most pizza for their money.

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Which is the best choice? Explain your answer.

For this item, a full-credit response (2 points) includes:

- choosing 2 medium pizzas and providing an explanation as to why

For example,

- "The area/ amount of the two choices of pizza is about the same, but the large pizza costs more than the 2 medium ones."
  OR
- "The area/amount of the two choices of pizza is about the same, but the 2 medium pizzas are less expensive."

For this item, a partial credit response (1 point) includes:

- 2 medium pizzas with irrelevant, flawed, or missing explanation
  OR
- 1 large pizza, but uses a correct process with minor mathematical error for 1 point each

For example,

- "2 medium pizzas because 2 is better than 1"
  OR
- "1 large pizza because the area is greater than 2 medium pizzas"

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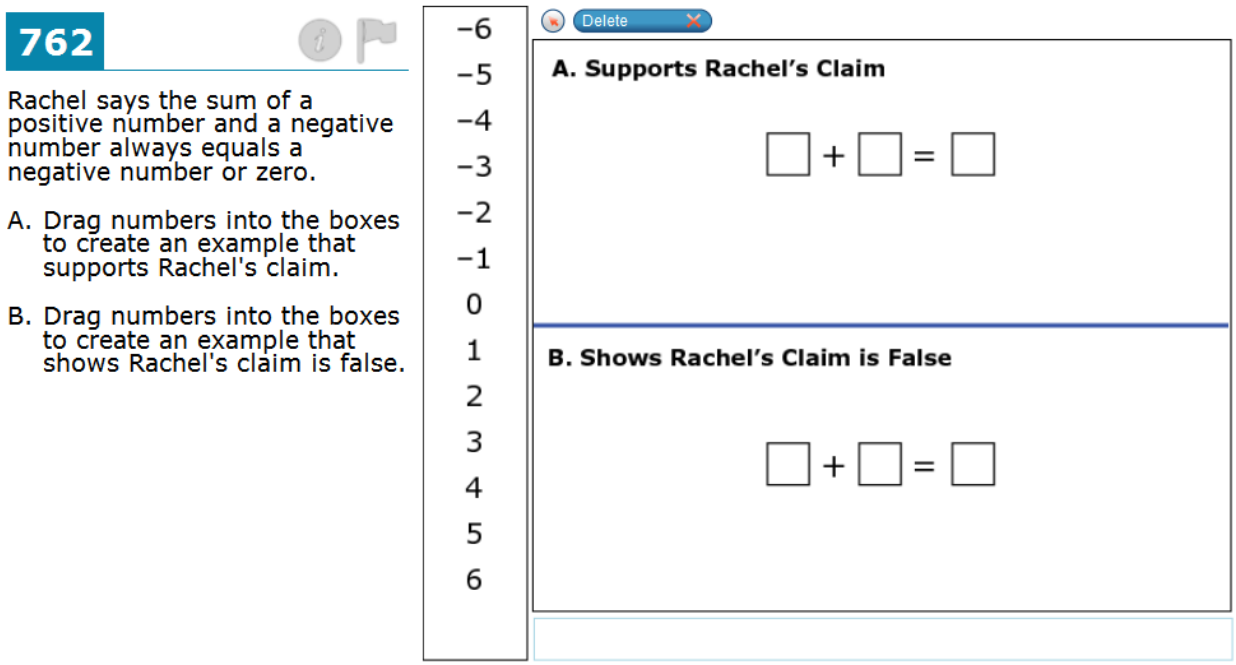
For this item, an incorrect response (0 points) includes:

- 1 large pizza and an irrelevant or missing explanation

For example,

- “1 large pizza”

This item is not graded for spelling or grammar



For this item, a full-credit response (2 points) includes:

- any negative number and positive number that sum to a negative number or zero in part A
  AND
- any negative number and positive number that sum to a positive number in part B

For example,

- $-1 + 1 = 0$
  AND
- $-1 + 2 = 1$

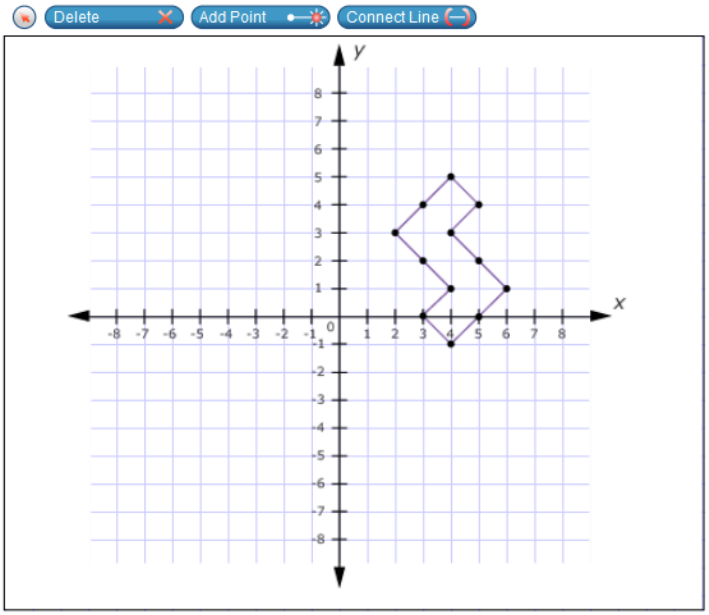
For this item, partial-credit response includes:

- any negative number and positive number that sum to a negative number or zero in part A (1 point)
  OR
- any negative number and positive number that sum to a positive number in part B (1 point)

768

Use the Connect Line tool to draw the image of the figure after the following transformations.

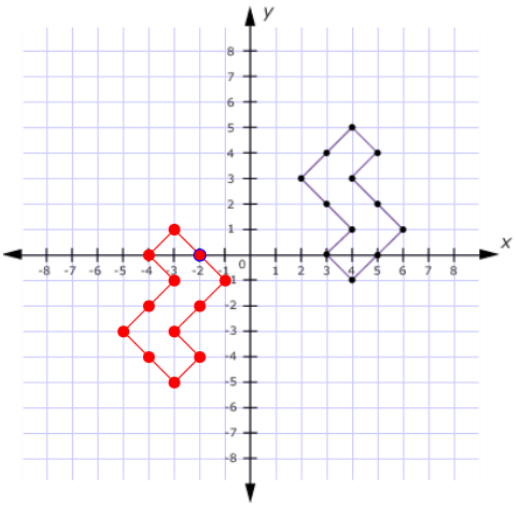
- a reflection over the *x*-axis
- a horizontal translation 7 units to the left



For this item, a full-credit response (2 points) includes:

- the figure reflected across the *x*-axis
  AND
- the figure translated 7 units to the left

For example,



For partial credit, the student completes one of the above tasks for 1 point each.

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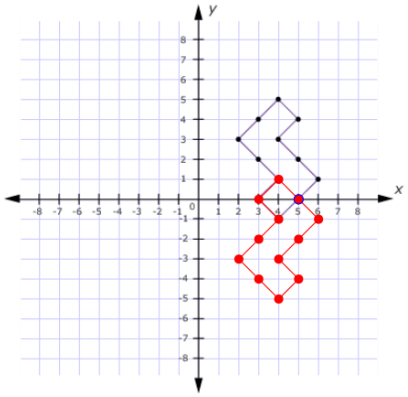
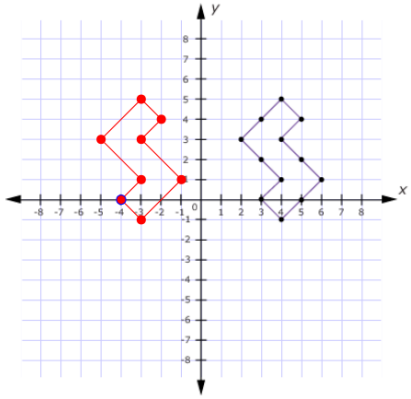
For example,

- the figure reflected across the *x*-axis



OR

- the figure translated 7 units to the left



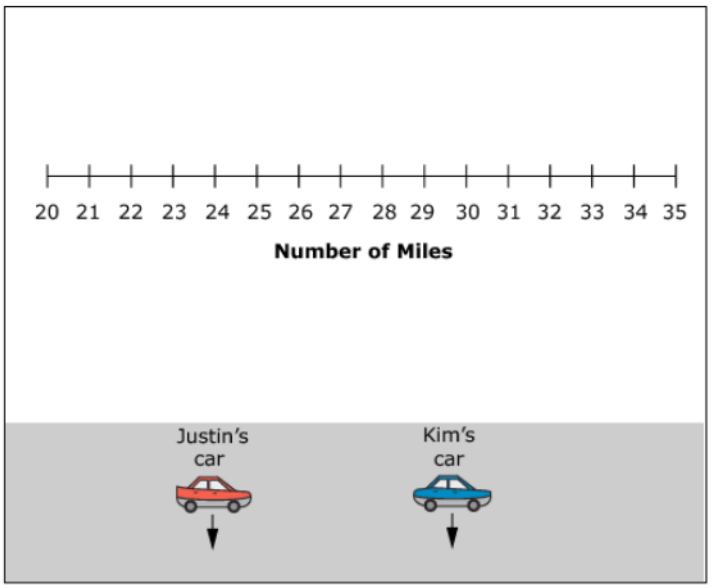
769

Justin's car can travel $77\frac{1}{2}$ miles with $3\frac{1}{10}$ gallons of gas.

Kim's car can travel $99\frac{1}{5}$ miles with $3\frac{1}{5}$ gallons of gas.

At these rates, how far can each car travel with 1 gallon of gas?

Drag each person's car to the number line to show the number of miles.



For this item, a full-credit response (2 points) includes:

- Justin's car at the 25-mile mark
  AND
- Kim's car at the 31-mile mark

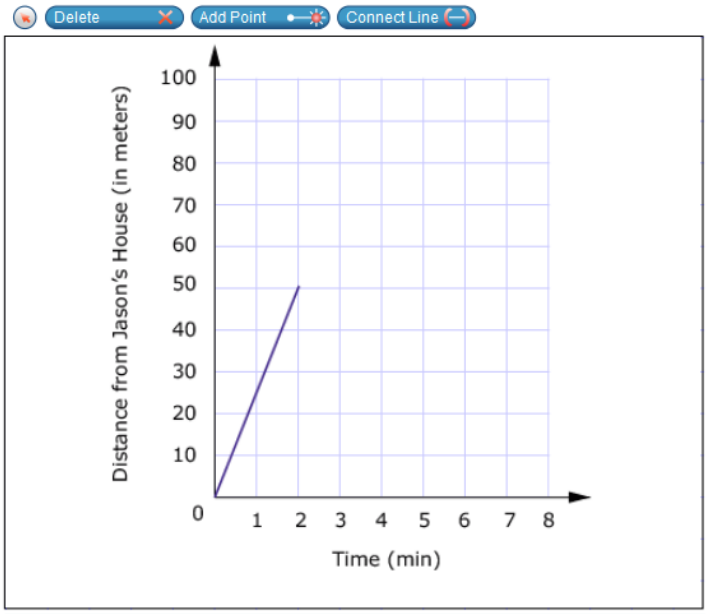
For partial credit, the student completes one of the above tasks for 1 point.

761

The school is 100 meters from Jason's house. The following describes his most recent trip:

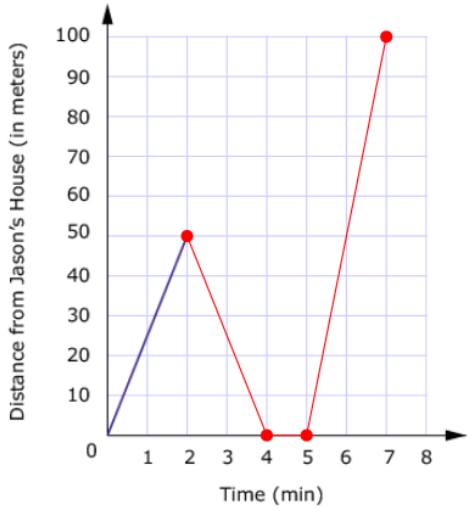
- He walked 50 meters toward school in 2 minutes. He realized that he left a book at home.
- He turned around and walked home at the same speed.
- He spent 1 minute looking for his book.
- He walked all the way to school at twice his original speed.

Use the Line tool to finish a graph that accurately represents Jason's trip.



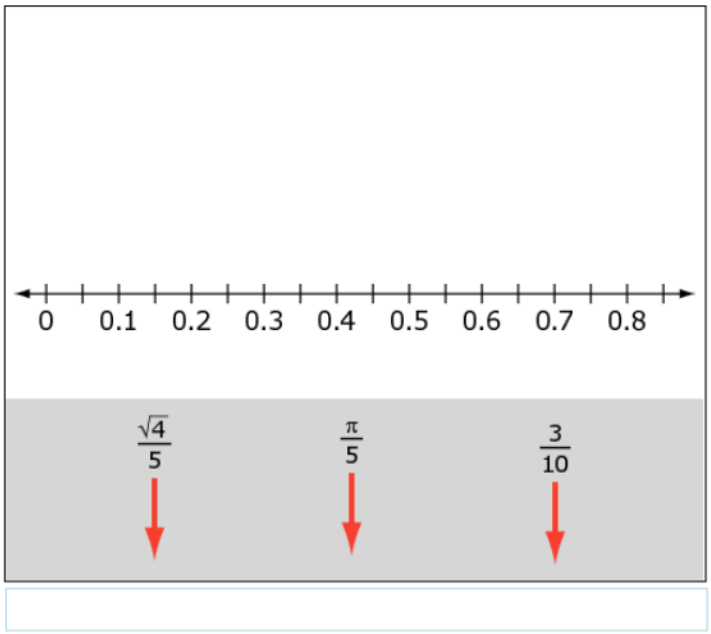
For this item, a full-credit response (1 point) includes:

- all 3 segments correctly plotted



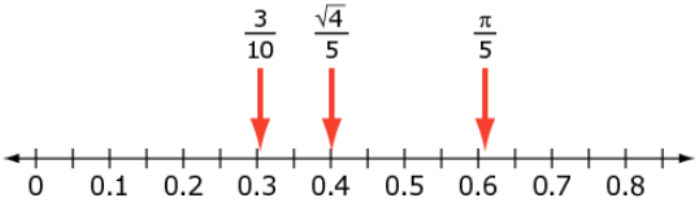
754

Drag each number to its correct position on the number line.



For this item, a full-credit response (2 points) includes:

- all 3 numbers placed in their correct position



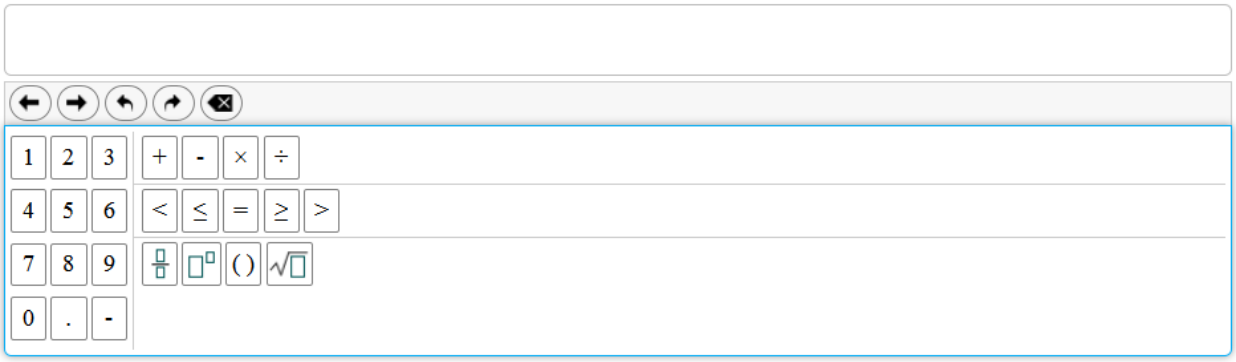
For partial credit (1 point), the student correctly places 2 numbers.

Two sides of a right triangle have lengths of $\sqrt{10}$ units and $\sqrt{6}$ units. There are two possible lengths for the third side.

774

Part A

What is the shortest possible side length, in units?



For this item, a full-credit response (1 point) includes:

- the value 2

Two sides of a right triangle have lengths of $\sqrt{10}$ units and $\sqrt{6}$ units. There are two possible lengths for the third side.

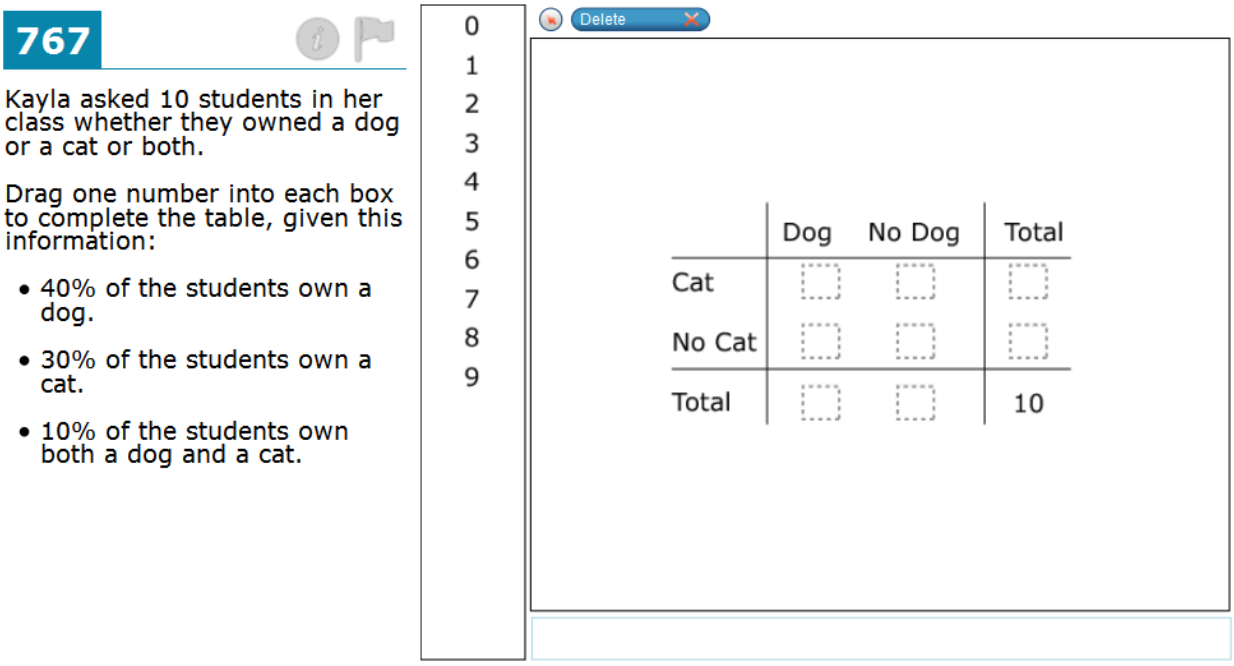
775

Part B

What is the longest possible side length, in units?

For this item, a full-credit response (1 point) includes:

- the value 4



For this item, a full-credit response (3 points) includes:

- 4 in the "Dog Total" section and 6 in the "No Dog Total" section
  AND
- 3 in the "Cat Total" section and 7 in the "No Cat Total" section
  AND
- correctly placing numbers that sum to the totals of the corresponding rows and columns

For example,

	Dog	No Dog	Total
Cat	1	2	3
No Cat	3	4	7
Total	4	6	10

For partial credit, the student completes the above tasks for 1 point each.

772

Segment FG begins at point $F(-2, 4)$ and ends at point $G(-2, -3)$. The segment is translated by $\langle x - 3, y + 2 \rangle$ and then reflected across the y-axis to form segment $F'G'$.

How long is segment $F'G'$?

Ⓐ 0

Ⓑ 2

Ⓒ 3

Ⓓ 7

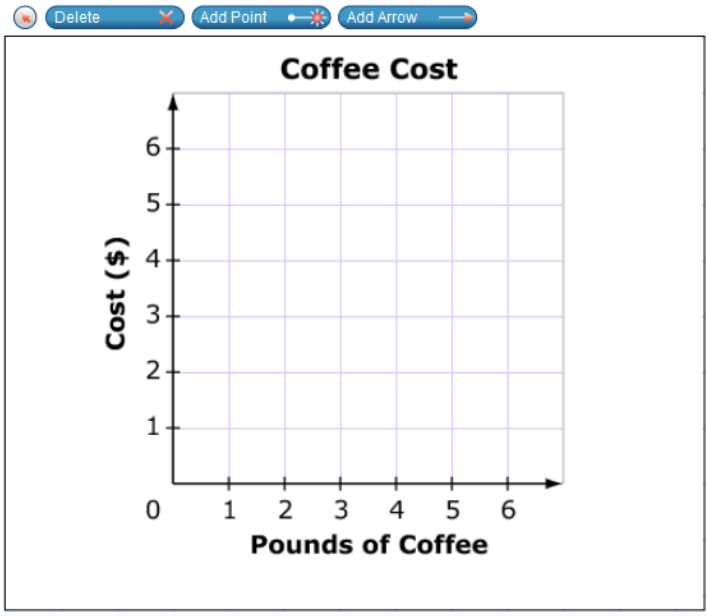
For this item, a full-credit response (1 point) includes:

- option D

766

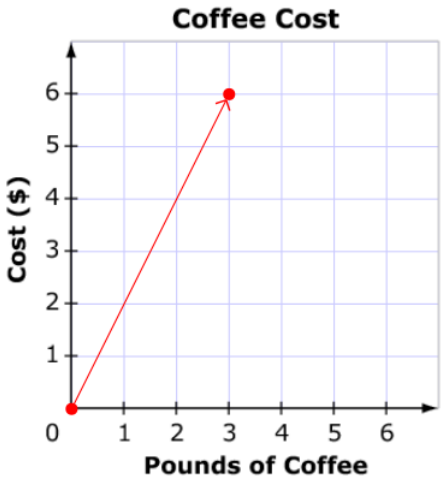
Coffee costs $2.00 per pound at a coffee shop.

Use the Add Arrow tool to draw a line that shows the proportional relationship between the number of pounds of coffee purchased and the total cost.



For this item, a full-credit response (1 point) includes:

- a correct ray constructed



763

A sphere and a cone have the same volume. Each figure has a radius of 3 inches.

What is the height of the cone?

Ⓐ 4 in

Ⓑ 6 in

Ⓒ 9 in

Ⓓ 12 in

For this item, a full-credit response (1 point) includes:

- option D

773

Joe solved this linear system correctly.

$6x + 3y = 6$

$y = -2x + 2$

These are the last two steps of his work.

$6x - 6x + 6 = 6$

$6 = 6$

Which statement about this linear system must be true?

(A) x must equal 6

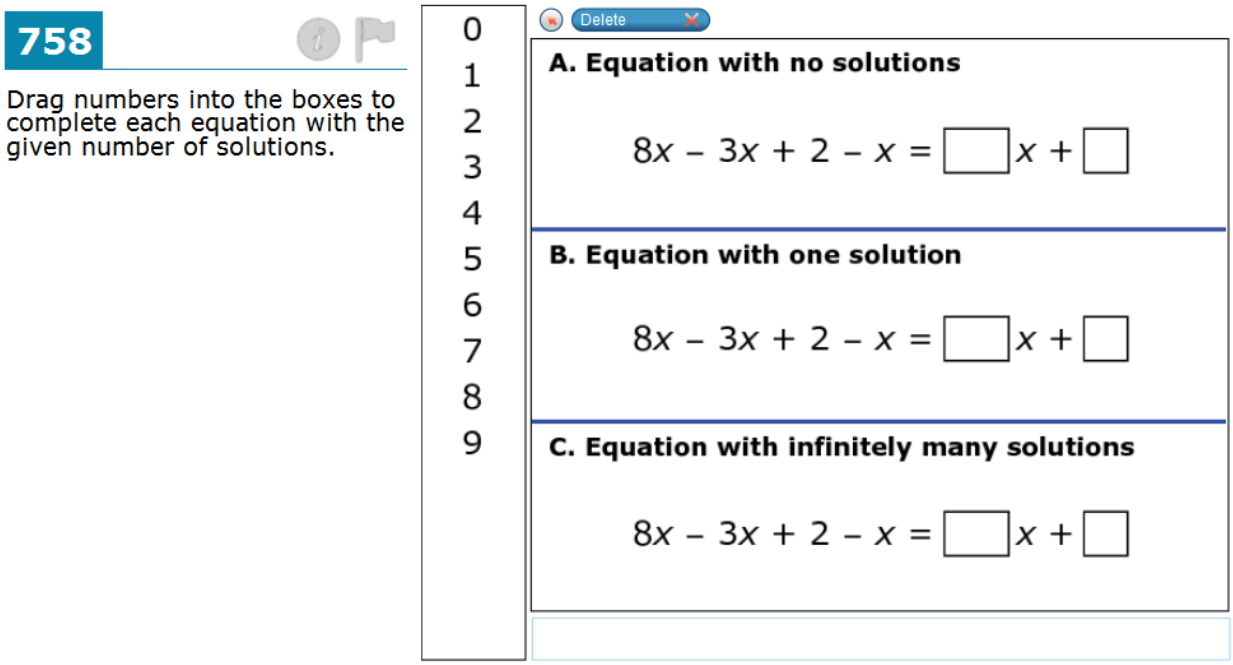
(B) y must equal 6

(C) There is no solution to this system.

(D) There are infinitely many solutions to this system.

For this item, a full-credit response (1 point) includes:

- option D



For this item, a full-credit response (2 point) includes:

- an equation with a slope of 4 and an intercept that is not 2 for part A
  AND
- an equation that does not have a slope of 4 for part B
  AND
- an equation with a slope of 4 and an intercept of 2 for part C

For partial credit (1 point), the student correctly answers part B and either part A or part C.

For example,

- $8x - 3x + 2 - x = 4x + 3$
  AND
- $8x - 3x + 2 - x = 3x + 3$
  AND
- $8x - 3x + 2 - x = 4x + 2$

Triangle *ABC* undergoes a series of some of the following transformations to become triangle *DEF*:

- rotation
- reflection
- translation
- dilation

776

Part A

Is triangle *DEF* always, sometimes, or never **congruent** to triangle *ABC*? Provide justification to support your conclusion.

For this item, a full-credit response (1 point) includes:

- the choice of “sometimes” and a correct explanation

For example,

- “Sometimes; triangle *DEF* is congruent to *ABC* under all translations, rotations, and reflections, but not under all dilations"
  OR
- “Sometimes, because dilations will not give a congruent figure”
  OR
- “Sometimes, because only rotations, translations, and reflections give a congruent figure”

For this item, an incorrect response (0 points) includes:

- the choice of “always” or “never”
  OR
- The choice of “sometimes” with an incorrect explanation

For example,

- “Never, because all transformations change the shape”

This item is not graded for spelling or grammar.

Triangle *ABC* undergoes a series of some of the following transformations to become triangle *DEF*:

- rotation
- reflection
- translation
- dilation

777

Part B

Is triangle *DEF* always, sometimes, or never **similar** to triangle *ABC*? Provide justification to support your conclusion.

For this item, a full-credit response (1 point) includes:

- the choice of “always” and a correct explanation

For example,

- “Always; by the definition of similarity, triangle *DEF* is the result of translations, reflections, rotations, and dilations and is therefore similar to triangle *ABC*.”
  OR
- “Always, because the transformation of any shape will always be similar”

For this item, an incorrect response (0 points) includes:

- the choice of “sometimes” or “never”
  OR
- the choice of “always” with an incorrect explanation

For example,

- "Always, because triangle *DEF* is equilateral”

This item is not graded for spelling or grammar.

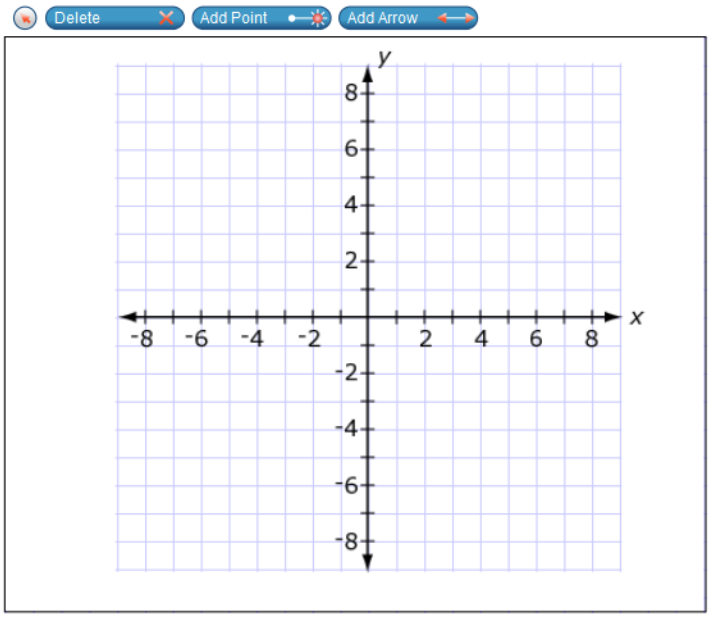
755

John and Kim wrote down two different functions that have the same rate of change.

John's function is represented by the table shown.

x	y
-1	-5
1	-1
3	3

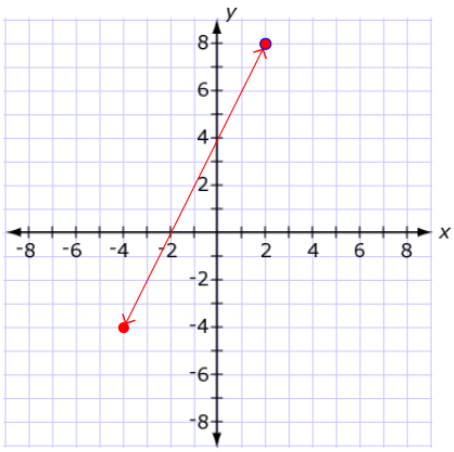
Use the Add Arrow tool to graph a function that could be Kim's function.



For this item, a full-credit response (1 point) includes:

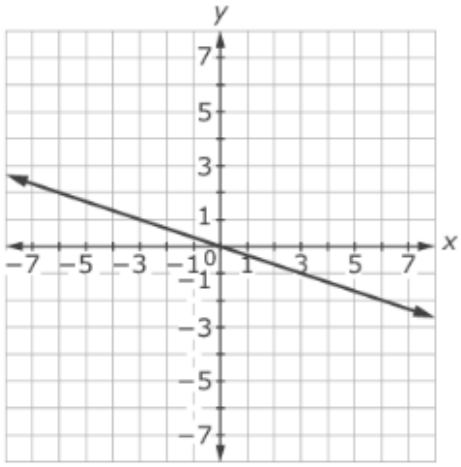
- a graph with a slope of 2

For example,

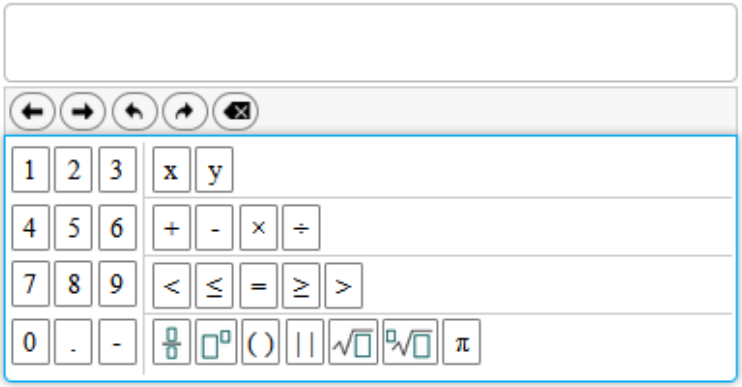


770

Look at the graph of the linear equation.



Write an equation for the line in slope-intercept form.



For this item, a full-credit response (1 point) includes:

- a correct equation, such as $y = -\frac{1}{3}x$

756

Kyle was given a problem to solve. The problem and his work are shown.

Select the part of Kyle's work that contains a mistake.

Then, select the part of the problem Kyle should read again to fix his mistake.

A company sells baseball gloves and bats. The gloves regularly cost $30 and the bats regularly cost $90. The gloves are on sale for $4 off, and the bats are on sale for 10% off. The goal is to sell $1200 worth of bats and gloves each week. Last week, the store sold 14 gloves and 9 bats.

Did the store meet its goal?

1. $30 − $4 = $26

   $26 × 14 = $364

2. $90 ÷ 0.9 = $100

   $100 × 9 = $900

3. $900 + $364 = $1264

For this item, a full-credit response (1 point) includes:

- "the bats are on sale for 10% off" is selected
  AND
- "$\$90 \div 0.9 = \$100$" is selected

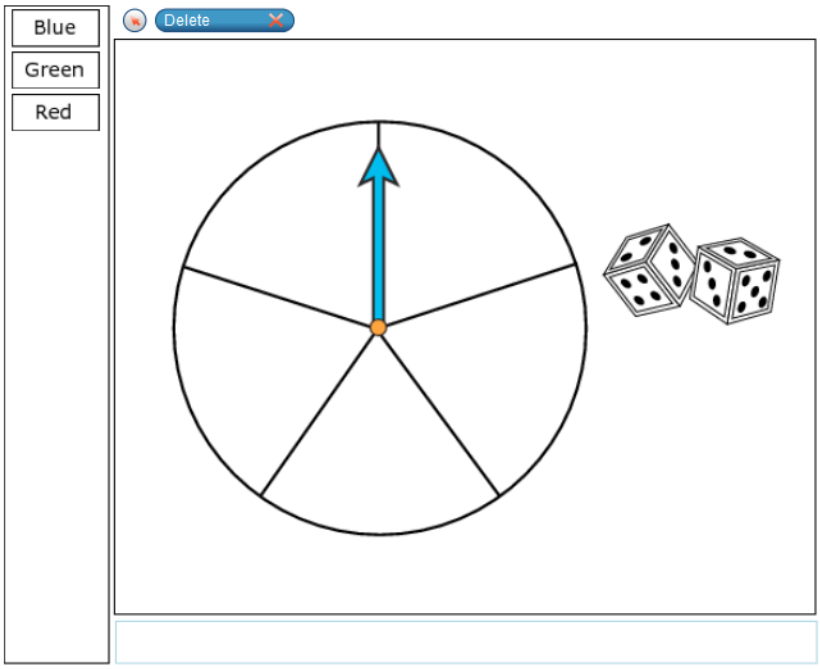
760

A game that uses a spinner and two number cubes is played at a game night. To win the game, a player must have two results:

- The spinner's arrow stops in a red section.
- The number cubes both land with an even number facing up.

The person in charge of game night wants 10% of the players to win.

Drag one color into each section of the spinner to design a spinner that reaches the goal.

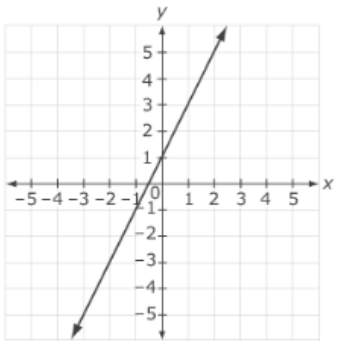


For this item, a full-credit response (1 point) includes:

- two red sections
  AND
- two blue sections
  AND
- one green section

771

Look at this graph of a function.



Which equation represents a function with a rate of change that is **greater than** the rate of change of the function shown in the graph?

Ⓐ $y = 3x - 1$

Ⓑ $y = \frac{x}{2} + 4$

Ⓒ $y = 2x + 2$

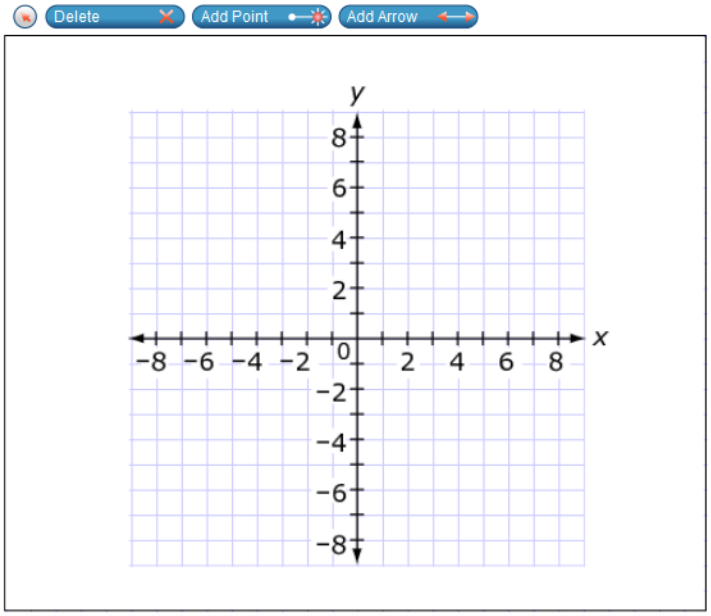
Ⓓ $y = \frac{x}{3} - 3$

For this item, a full-credit response (1 point) includes:

- option A

757

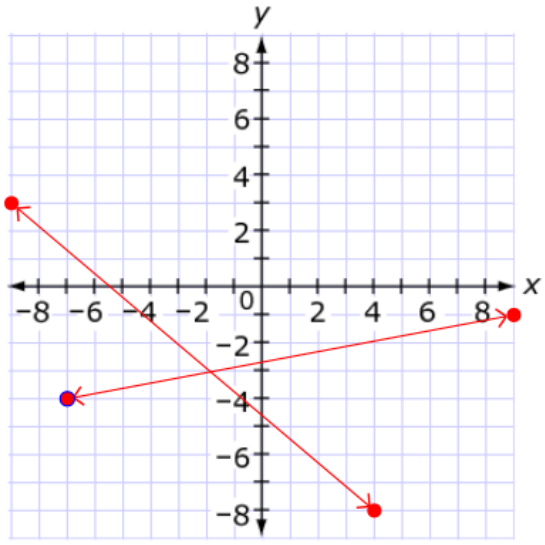
Use the Add Arrow tool to graph a system of two equations that has a single solution of $(-2, -3)$.



For this item, a full-credit response (1 point) includes:

- any 2 lines that intersect at the point $(-2, -3)$

For example,



1059

Look at these numbers.

$\sqrt{2}, \sqrt{3}, \sqrt{5}, \sqrt{7}$

Classify the numbers by selecting all that apply.

- ☐ integer
- ☐ irrational
- ☐ rational
- ☐ real

For this item, a full-credit response (1 point) includes:

- option B
  AND
- option D