TAKS-M

Texas Assessment of
Knowledge and Skills–Modified

MATHEMATICS
Grade 10

2010 Sample Items

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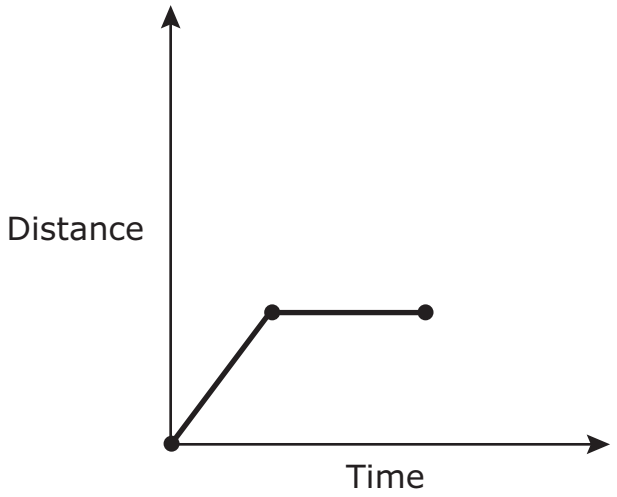
1 The members of a math club want to buy matching shirts. Each shirt costs \$11. In addition, there is a one-time fee of \$77 to design the shirts. Which equation can be used to find y, the total amount the math club will pay for x shirts?

A $y = 77x + 11$

B $y = 11x + 77$

C $y = 88x$

1 Look at the graph below.



Which situation could this graph best represent?

A A boy ran for 10 minutes and then rested for 15 minutes.

B A boy ran for 10 minutes and then walked for 15 minutes.

C A boy walked for 10 minutes and then ran for 15 minutes.

2 Simplify the algebraic expression shown below.

$$8x - 3y + 5(x - y) + 6y$$

A $13x + 2y$

B $13x - 2y$

C $9x + 2y$

1 A company rents cars.

- It charges \$0.15 for each mile that the car is driven.
- It adds a \$25 fee for each day that the car is rented.
- The equation $y = 0.15x + 25$ can be used to find the total cost of renting a car for 1 day.

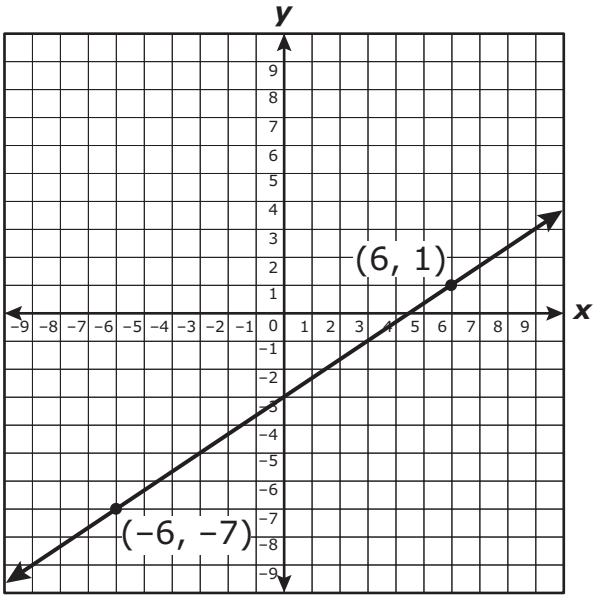
If the company increases the rate per mile driven by \$0.05, which equation can be used to find the new rental cost for 1 day?

A $y = 0.20x + 25.05$

B $y = 0.10x + 24.95$

C $y = 0.20x + 25.00$

1 Look at the graph of a linear function below.



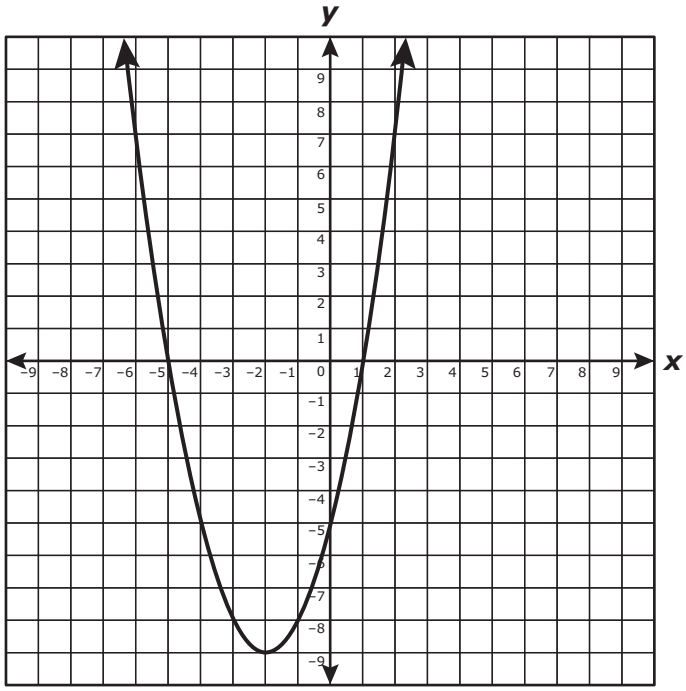
For this function, what is the value of x when $y = -3$?

A −5

B 9

C 0

1 Look at the graph of a function below.



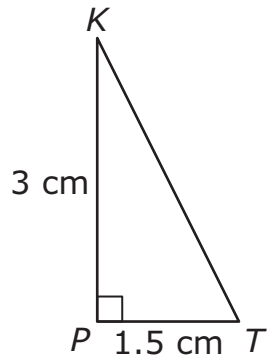
Which of the following best represents a point where this function intersects the *x*-axis?

A (1, 0)

B (–2, –9)

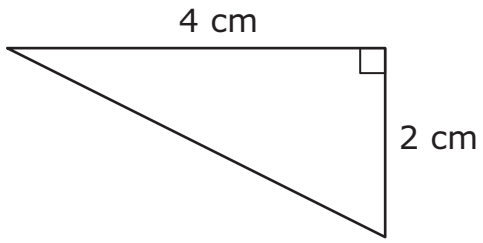
C (0, –5)

1 Triangle *KPT* is shown below. The dimensions are given in centimeters (cm).

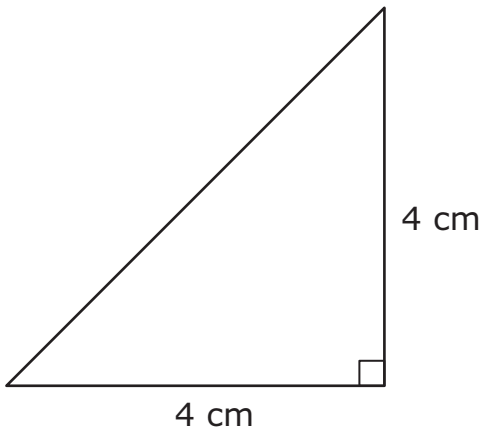


Which of the following triangles best represents a dilation of triangle *KPT* by a scale factor of $\frac{4}{3}$?

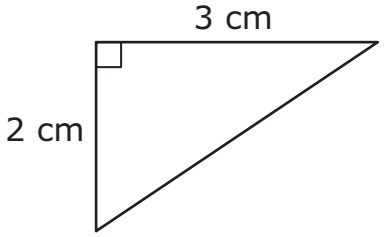
A



B

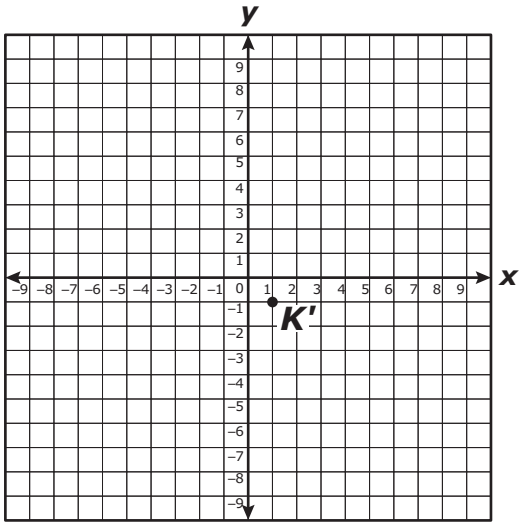


C

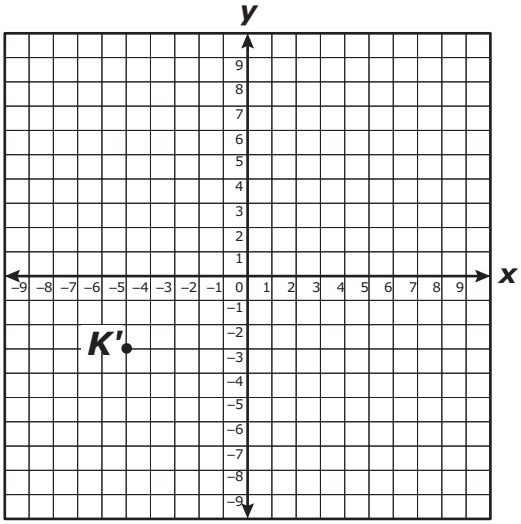


2 Point K $(-5, -1)$ is reflected across the line $y = -2$. Which of the following best represents K'?

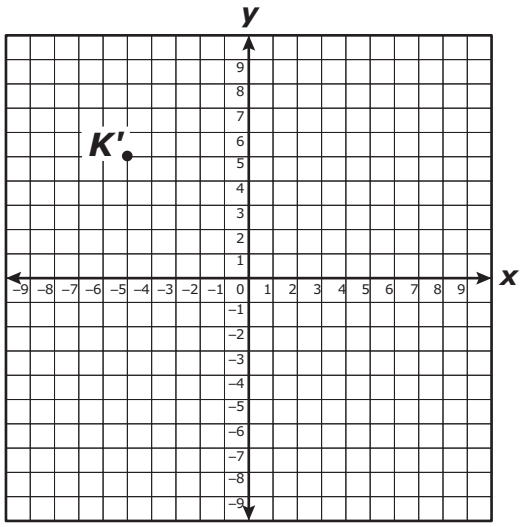
A



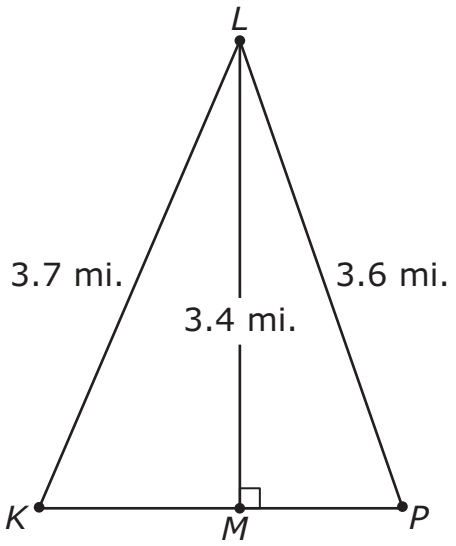
C



B



1 The drawing below shows some of the distances that an engineer measured between 4 points. The distances are given in miles (mi.).



Pythagorean Theorem

$a^2 + b^2 = c^2$

Which of the following is closest to the distance between point *M* and point *P*?

A 1.2 miles

B 2.6 miles

C 1.5 miles

1 At a high school, 100 students were asked to choose their favorite fruit pie. The results of the survey are shown in the table below.

Favorite Fruit Pie

Flavor	Number of Students
Strawberry	10
Cherry	35
Raspberry	30
Lemon	25

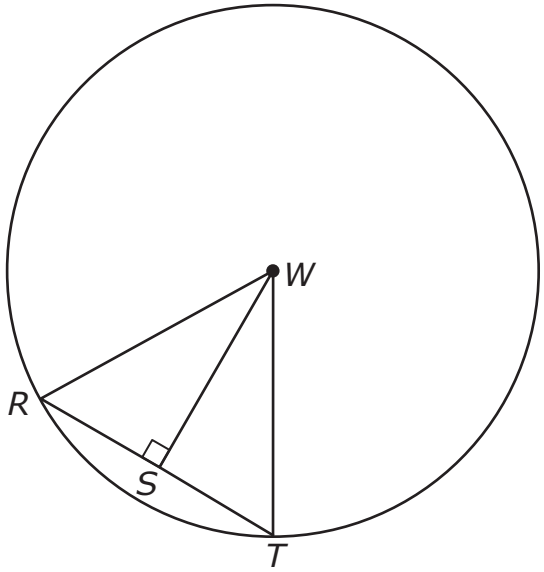
There are a total of 1200 students at this high school. Based on the table, how many students at this high school would choose raspberry pie?

A 300

B 360

C 420

1 Look at circle *W* below.



Pythagorean Theorem

$a^2 + b^2 = c^2$

Points *R* and *T* lie on circle *W*. Circle *W* has a diameter of 28 centimeters (cm), and $SW = 12$ centimeters. Which of these is closest to the length of $\overline{RT}$?

A 25 cm

B 14 cm

C 7 cm

2 Lisa drew a circle with a diameter of 15 inches. She measured the circumference of the circle and found it to be 31 inches. She concluded that her measurement of the circumference was incorrect. Which explanation shows why Lisa's measurement of the circumference was incorrect?

A The circumference should be slightly larger than 3 times the radius.

B The circumference should be slightly larger than 3 times the diameter.

C The circumference should be slightly larger than 3 times the radius squared.

Item Number	Student Expectation	Correct Answer
OBJECTIVE 1		
1	A.1 (C)	B
OBJECTIVE 2		
1	A.2 (C)	A
2	A.4 (B)	B
OBJECTIVE 3		
1	A.6 (F)	C
OBJECTIVE 4		
1	A.7 (B)	C
OBJECTIVE 5		
1	A.10 (B)	A
OBJECTIVE 6		
1	8.6 (A)	A
2	8.6 (B)	C
OBJECTIVE 8		
1	8.9 (A)	A
OBJECTIVE 9		
1	8.11 (B)	B
OBJECTIVE 10		
1	8.14 (C)	B
2	8.16 (B)	B