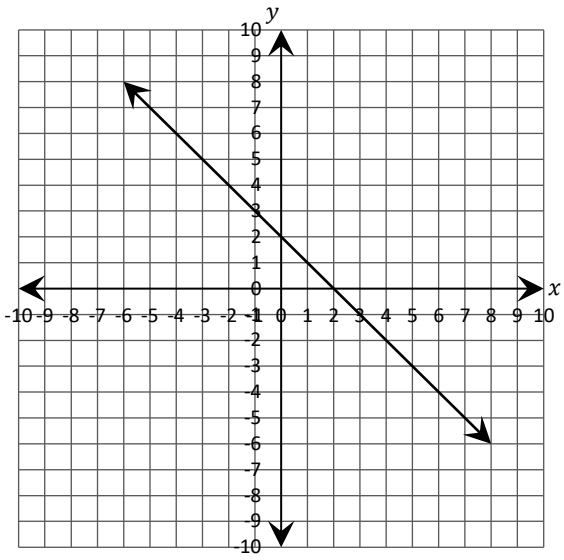
1. A linear relationship is graphed below.



What is the slope? _____

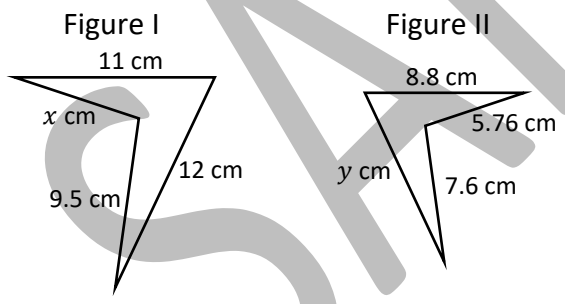
What is the y −intercept? _____

Write an equation for this linear relationship.

Equation: _____

TEKS 8.4C

2. Figure I and Figure II are similar quadrilaterals.

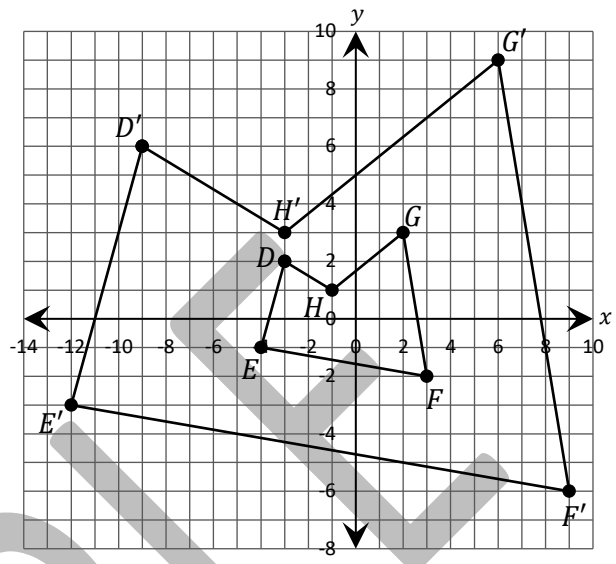


Complete each proportion.

- $\frac{12}{y} = \frac{x}{\quad}$
- $\frac{11}{9.5} = \frac{8.8}{\quad}$
- $\frac{y}{\quad} = \frac{12}{9.5}$
- $\frac{5.76}{x} = \frac{7.6}{\quad}$

TEKS 8.3A

3. Polygon $DEFGH$ was dilated to form polygon $D'E'F'G'H'$.



List the vertex locations of each polygon.

$DEFGH$	
D	
E	
F	
G	
H	

$D'E'F'G'H'$	
D'	
E'	
F'	
G'	
H'	

What is the dilation factor? _____

Describe algebraically the rule that was applied to polygon $DEFGH$ to create polygon $D'E'F'G'H'$.

$(x, y) \rightarrow (\quad , \quad)$

Describe the corresponding angles.

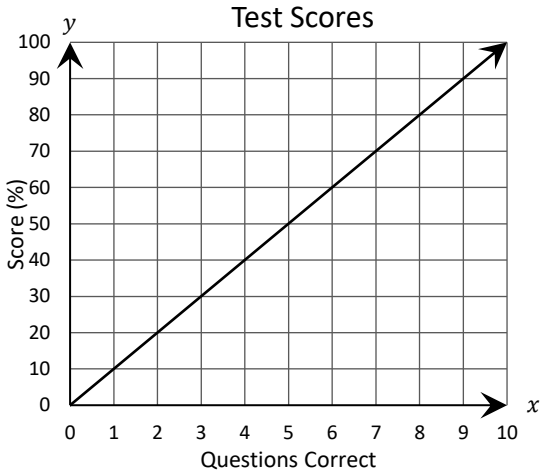
_____

The perimeter of $D'E'F'G'H'$ is _____ the perimeter of $DEFGH$.

The area of $D'E'F'G'H'$ is _____ the area of $DEFGH$.

TEKS 8.3C

1. The graph shows the grade a student will earn based on the correct answers on a 10-question test.



Write an equation to represent the relationship between y, the grade earned, and x, the number of questions answered correctly.

Equation: _____

What is the slope? _____

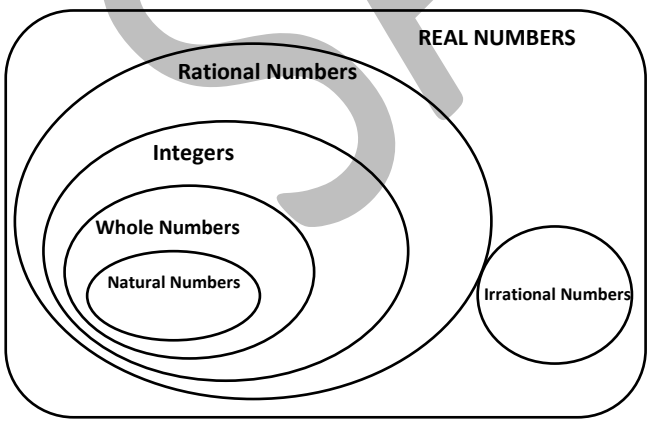
What does the slope represent? _____

_____

TEKS 8.4C

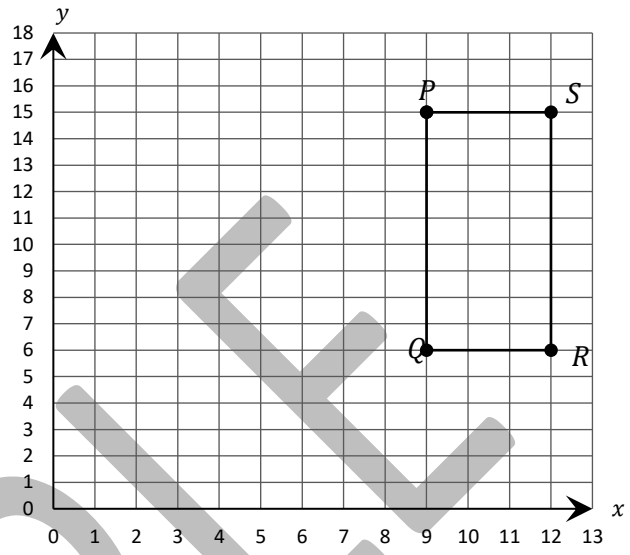
2. Add the following values to the diagram.

$\frac{13}{4}$, $0.\overline{66}$, $\sqrt{225}$, 0, 7, -1, $\sqrt{89}$



TEKS 8.2A

3. Quadrilateral $PQRS$ is shown on the coordinate plane.



Dilate quadrilateral $PQRS$ using the origin as the center of dilation. Apply a scale factor of $\frac{1}{3}$ to create quadrilateral $P'Q'R'S'$. List the vertex locations of each figure in the tables below.

$PQRS$	
P	
Q	
R	
S	

$P'Q'R'S'$	
P'	
Q'	
R'	
S'	

Describe algebraically the rule that was used to create $P'Q'R'S'$ from $PQRS$.

$(x, y) \rightarrow$ (,)

Are the corresponding sides proportional? _____

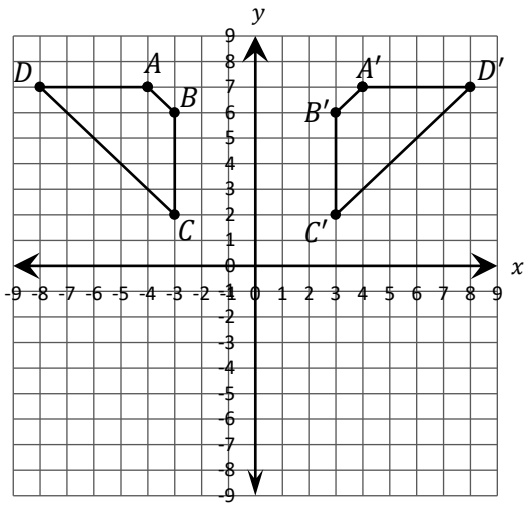
Are the corresponding sides congruent? _____

Are the corresponding angles proportional? _____

Are the corresponding angles congruent? _____

TEKS 8.3C

1. Trapezoid $ABCD$ was reflected across the y −axis.



Name the coordinates of each vertex before and after the reflection.

Trapezoid $ABCD$

Vertex	(x_1, y_1)
A	
B	
C	
D	

Trapezoid $A'B'C'D'$

Vertex	(x_2, y_2)
A'	
B'	
C'	
D'	

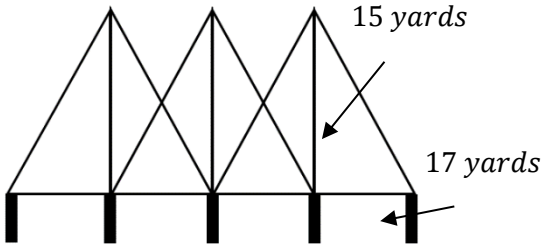
Describe algebraically the rule that was applied to trapezoid $ABCD$ to create trapezoid $A'B'C'D'$.

$(x, y) \rightarrow$ (,)

Congruency _____ preserved.
was or *was not*

TEKS 8.10C

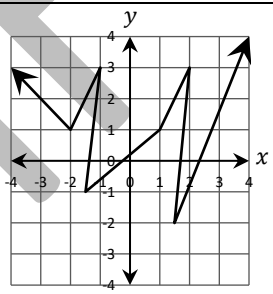
2. The bridge shown below is made from congruent right triangles. Using the given measurements, determine the length of the bridge.



Length of Bridge: _____

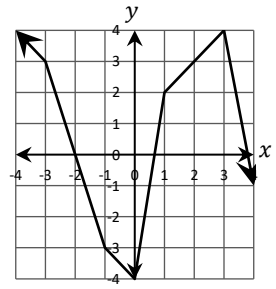
TEKS 8.7C

3. Determine if each graph represents a function.



Function

Not a Function



Function

Not a Function

TEKS 8.5G

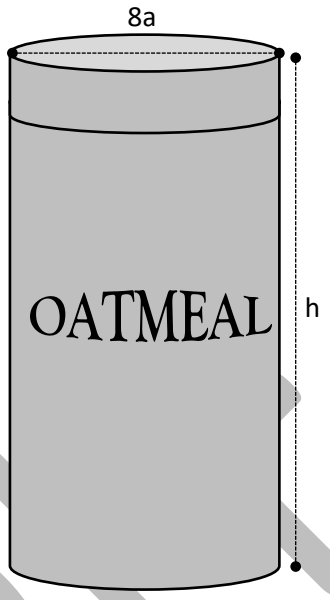
Calculator Data Entry: Simplify.

$21\frac{3}{5} \div -4\frac{1}{2} =$ _____

$-17\frac{1}{6} \div -\frac{3}{8} =$ _____

24. Oatmeal is packaged in a cylindrical container with the dimensions shown in the drawing.

Which equation can be used to find the volume of the oatmeal container?



F. $V = (8a^2)h$

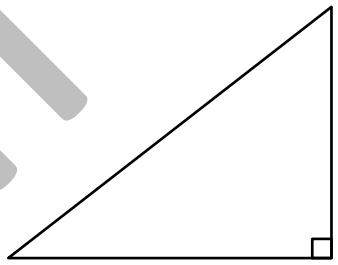
G. $V = (2\pi \bullet 8a)h$

H. $V = \pi(4a)^2h$

J. $v = (\pi \bullet 4a^2)h$

TEKS 8.6A

25. Look at the right triangle shown below. Which of the following could be the triangle's edge lengths?



A. 5.4, 10.6, 16

B. 12, 16.8, 18.2

C. 8, 10, 12.5

D. 1.2, 1.6, 2

TEKS 8.7C

26. Fido is a dog. He weighs 22 pounds and is overweight. The veterinarian put Fido on a diet, and he lost the same amount of weight for 3 weeks in a row. The table shows Fido's progress.

What is the y −intercept in this situation, and what does it represent?

Fido's Progress

Number of Weeks, x	Fido's Weight (lbs.) y
0	22
1	21.5
2	21
3	20.5

F. 22; it represents Fido's original weight

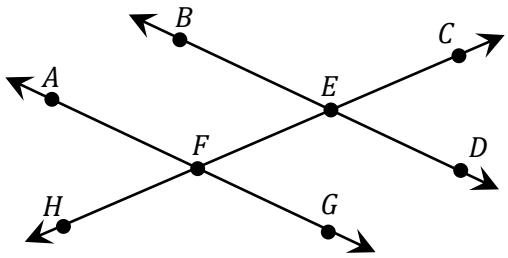
G. 0.5; it represents the weight lost each week

H. 3; it represents the weeks on the diet

J. 20.5; it represents Fido's weight after 3 weeks

TEKS 8.4C

1. Two parallel lines are intersected by a transversal. The $m\angle AFH$ is 50°.



Which of the following is **not** true?

A. The $m\angle GFE$ is 50° because $\angle AFH$ and $\angle GFE$ are vertical angles.

B. The $m\angle GFH$ is 130° because $\angle AFH$ and $\angle GFH$ are supplementary angles.

C. The $m\angle AFE$ is 130° because $\angle AFE$ and $\angle AFH$ are a linear pair of angles.

D. The $m\angle CED$ is 40° because $\angle CED$ and $\angle AFH$ are complementary angles.

TEKS 8.8D

2. An ice cream shop sells sugar cones. The height of the sugar cone is 15 centimeters and the diameter measures 5 centimeters. What is the approximate volume of the sugar cone?

F. 78 cm³

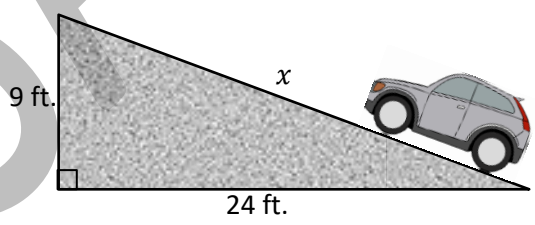
G. 98 cm³

H. 294 cm³

J. 492 cm³

TEKS 8.7A

3. The diagram below represents the side view of a car ramp.



Which of the following is the closest to the value of x?

A. 20 ft

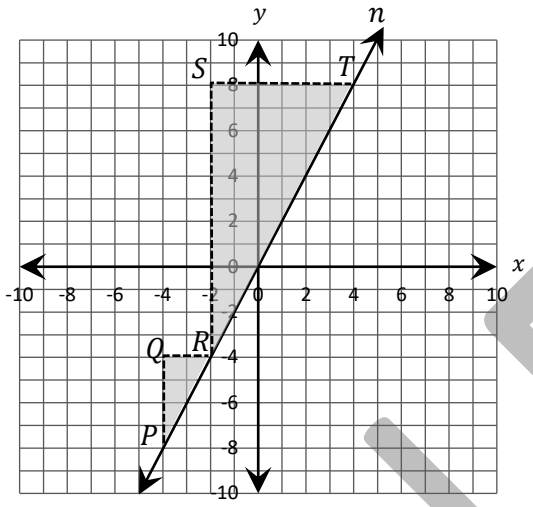
B. 22 ft

C. 24 ft

D. 26 ft

TEKS 8.7C

14. ΔPQR is similar to ΔRST.



Which proportion can be used to show that the slope of $\overline{PR}$ is equal to the slope of $\overline{RT}$?

F. $\frac{-4-(-8)}{-2-(-4)} = \frac{8-(-4)}{4-(-2)}$

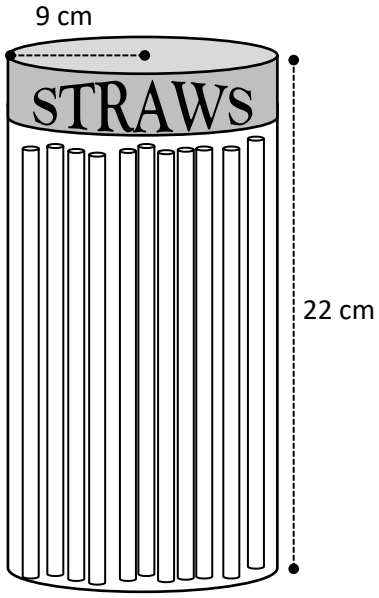
G. $\frac{-8-(-4)}{-4-(-2)} = \frac{8-4}{-4-(-2)}$

H. $\frac{-8-(-4)}{-2-(-4)} = \frac{4-(-2)}{8-(-4)}$

J. $\frac{-8-8}{-4-4} = \frac{-2-(-4)}{-4-(-8)}$

TEKS 8.4A

15. A local restaurant keeps straws in a cylindrical container with the dimensions shown in the drawing. Which equation can be used to find the volume of the cylindrical container?



A. $V = (2\pi \bullet 9)(22)$

B. $V = (\pi \bullet 9^2)(22)$

C. $V = (9^2)(22)$

D. $V = (\pi \bullet 18^2)(22)^3$

TEKS 8.6A