

# Answer Key

## UNIT 6 FINAL REVIEW

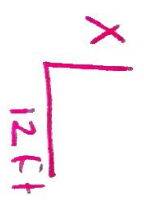
1) The side lengths of the figure below are dilated by a scale factor of  $\frac{1}{2}$ . Which statement describes the figure that results?



A: 50  
P: 30

A: 2  
P: 6

- A. 10 feet 9 inches
- B. 10 feet 11 inches
- C. 8 feet 7 inches
- D. 8 feet 8 inches



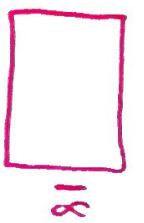
$\frac{x}{12} = \frac{6}{8}$   
 $\frac{x}{12} = \frac{3}{4}$   
 $x = \frac{3}{4} \times 12$   
 $x = 9$

A. The area of the original figure is 25 times the area of the figure that results.

B. The perimeter of the original figure is 25 times the perimeter of the figure that results.

C. The area of the original figure is 10 times the area of the figure that results.

D. The perimeter of the original figure is 10 times the perimeter of the figure that results.



A = 24 \* 18  
A = 432



A = 24 \* 18  
A = 432

3) If the rectangle is dilated by a scale factor of  $\frac{1}{2}$ , what will be the new area?



A = 24 \* 8  
A = 192



- A.  $y = \frac{1}{4}x$
- B.  $y = -\frac{1}{4}x$
- C.  $y = x - 2$
- D.  $y = -4x - 2$

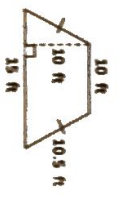
8) What is the equation of a line that crosses the y-axis at (0, 4) and has a slope of -3?

- A.  $y = \frac{1}{3}x$
- B.  $y = -\frac{1}{3}x$
- C.  $y = 4x - 2$
- D.  $y = -3x + 4$



$m = -3$   
 $b = 4$   
 $y = mx + b$   
 $y = -3x + 4$

4) If the quadrilateral below is dilated by a scale factor of  $\frac{1}{2}$ , what will be the new perimeter?



- A. P = 22.2 ft
- B. P = 9.4 ft
- C. P = 9.2 ft
- D. P = 38 ft

$P = 2 + 3 + 2.1 + 2.1$

5) A lamp post casts a 12 foot shadow at 5:00 in the evening. At the same time of day, Chase's shadow is 8 feet 3 inches long. If Chase is 6 feet tall, what is the approximate height of the lamp post?



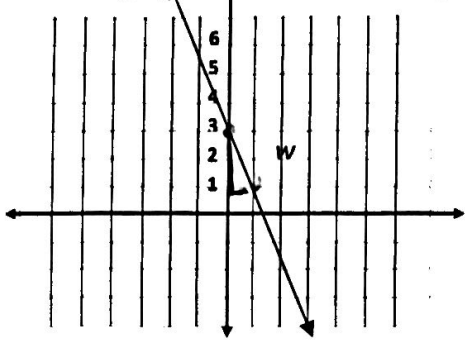
What is the incline slope of the ramp?

- A.  $\frac{1}{2}$
- B.  $\frac{1}{10}$
- C. 5
- D. 10

$\frac{5}{10} = \frac{1}{2}$

$\frac{8 \frac{3}{4}}{11} = \frac{8 \frac{3}{4}}{11}$   
 $\frac{8 \frac{3}{4}}{11} = \frac{8 \frac{3}{4}}{11}$

9) Line  $w$  is graphed in the coordinate grid.



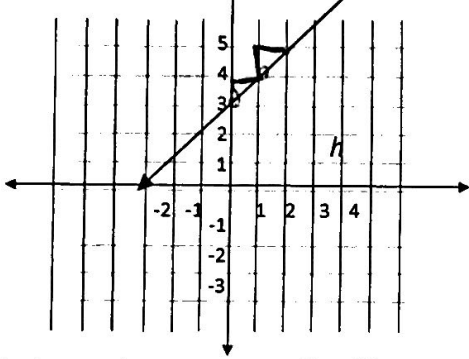
C

What equation represents line  $w$ ?

- A.  $y = 6x + 2$
- B.  $y = 2x + 6$
- C.  $y = -2x + 3$
- D.  $y = -3x + 6$

$m = -\frac{2}{1} = -2$   
 $b = 3$   
 $y = mx + b$   
 $y = -2x + 3$

10) Line  $h$  is graphed in the coordinate grid.



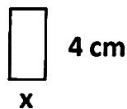
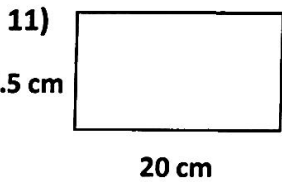
C

What equation represents line  $h$ ?

- A.  $y = -x + 3$
- B.  $y = -3x - 3$
- C.  $y = x + 3$
- D.  $y = 3x +$

$m = 1$   
 $b = 3$   
 $y = mx + b$   
 $y = x + 3$

Find the length of the missing side, and determine the Scale Factor.

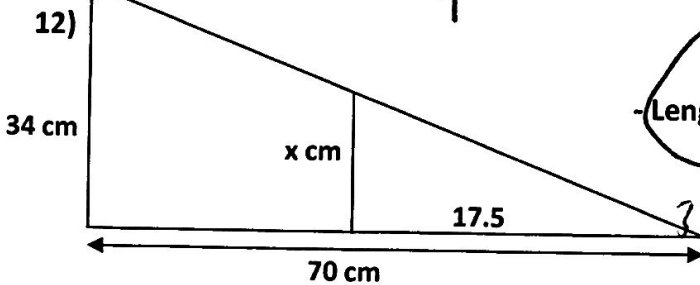


- Length of  $x$ : 1.9

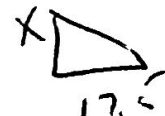
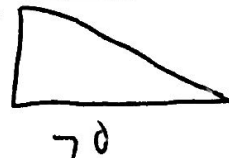
- What is the scale factor of the large rectangle to the small rectangle?  $\times \frac{1}{5}$

- What is the scale factor of the small rectangle to the large rectangle?  $\times 5$

$\frac{9.5}{20} = \frac{x}{4}$



- Length of  $x$ ?  $x = 8.5$



$\frac{34}{70} = \frac{x}{17.5}$