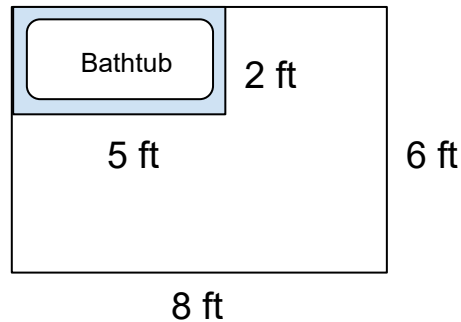


_____ 1. Makalya wants to retile her bathroom floor. She does NOT need to tile underneath the bathtub. According to the drawing below, what is the area of the bathroom floor that needs to be retiled?



- A. 10 sq ft
 - B. 38 sq ft
 - C. 48 sq ft
 - D. 58 sq ft
-

_____ 2. The formula for the perimeter of a rectangle with length L and width W is given below. If a rectangle has a perimeter 24, what could be its length L and width W?

$$P = 2(L + W)$$

- A. $L = 2, W = 12$
 - B. $L = 4, W = 20$
 - C. $L = 5, W = 7$
 - D. $L = 8, W = 3$
-

_____ 3. Steve has a square patio with sides of length 9 feet. He plans to enlarge it to a rectangular patio by increasing the length by 3 feet and the width by 2 feet. How much bigger in square feet will the new patio be compared to the old patio?

- A. 6
- B. 12
- C. 29
- D. 51

____ 4. If the length L of a rectangle is 3 less than twice the width W , which of the following gives the length of the rectangle in terms of the width?

- A. $L = 3 - 2W$
 - B. $L = 2W - 3$
 - C. $L = 3W - 2$
 - D. $L = 2 - 3W$
-

____ 5. If a triangle has sides of length x , $x + 2$, and $x - 4$, what is the perimeter of the triangle in terms of x ?

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

____ 6. What is the area of a square that has a perimeter of 24 feet?

- A. 24 square feet
 - B. 36 square feet
 - C. 48 square feet
 - D. 64 square feet
-

____ 7. A square has an area of 36 cm^2 . What is the perimeter of the square?

- A. 144 cm
- B. 24 cm
- C. 18 cm
- D. 9 cm

____ 8. A rectangular swimming pool is x meters wide. The length of the swimming pool is twice as long as the width. If the perimeter of the pool is 64 meters, which of the following equations represents the given information?

- A. $x + x + 2x + 2x = 64$
 - B. $x + 2x = 64$
 - C. $x + 2 + x + 2 = 64$
 - D. $2x + 2x + 2x + 2x = 64$
-

____ 9. If the cost of carpeting a floor is \$2.50 per square foot, how much will it cost to carpet a rectangular floor that is 10 feet by 12 feet?

- A. \$112
 - B. \$120
 - C. \$250
 - D. \$300
-

____ 10. Figure 2 is a 90° clockwise rotation of Figure 1. Which of the following angles in figure 2 corresponds to $\angle A$ in figure 1?

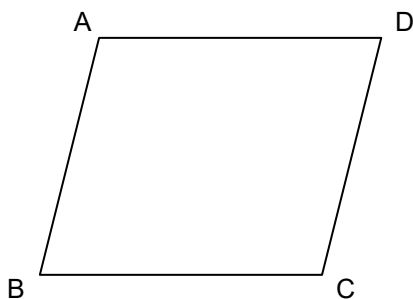


Figure 1

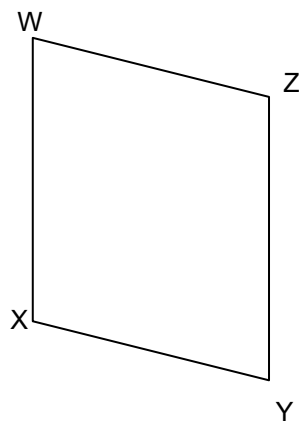
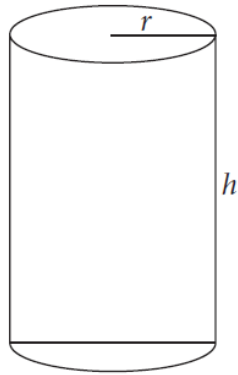


Figure 2

- A. $\angle W$
- B. $\angle X$
- C. $\angle Y$
- D. $\angle Z$

____ 11.

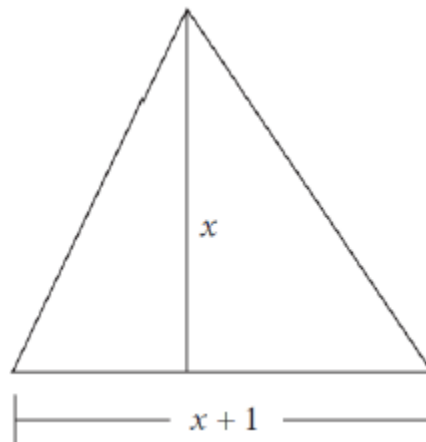


The formula for the volume of the right circular cylinder shown is $V = \pi r^2 h$.

If $r = 2b$ and $h = 5b + 3$, what is the volume of the cylinder in terms of b ?

- A. $10\pi b^2 + 6\pi b$
- B. $20\pi b^3 + 12\pi b^2$
- C. $20\pi^2 b^3 + 12\pi^2 b^2$
- D. $50\pi b^3 + 20\pi b^2 + 90\pi b$

____ 12.



The area of the triangle above is 21. What is the value of x ?

- A. 3
- B. 6
- C. 7
- D. 11

____ 13. In a right triangle, the hypotenuse measures 15 cm and one leg measures 12 cm. What is the length, in cm, of the other leg of this triangle?

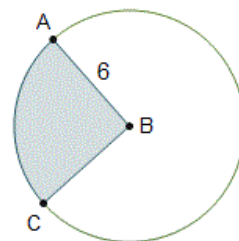
- A. 13
 - B. 9
 - C. 10
 - D. 11
-

____ 14. What is the perimeter of a square with side lengths of 12 feet?

- A. 48 feet
 - B. 144 feet
 - C. 24 feet
 - D. 16 feet
-

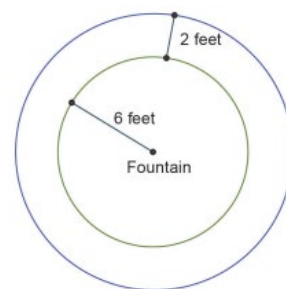
____ 15. The measure of central angle ABC is 90° . What is the area of the shaded sector?

- A. 6π units²
- B. 9π units²
- C. 18π units²
- D. 36π units²



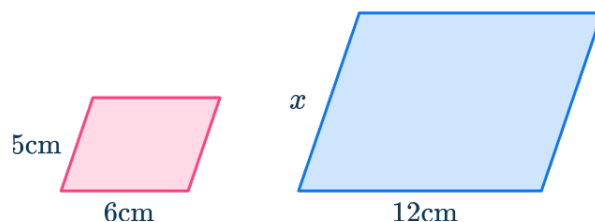
____ 16. A fountain with a circular base has a radius of 6 feet and is surrounded by a circular path that has a width of 2 feet. What is the approximate area occupied by the path alone?

- A. 87.96 sq ft
- B. 28.12 sq ft
- C. 64.37 sq ft
- D. 102.11 sq ft



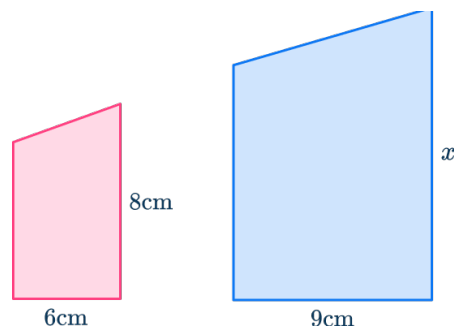
____ 17. The parallelograms pictured are similar. Find the value of x.

- A. $x = 9$ cm
- B. $x = 10$ cm
- C. $x = 11$ cm
- D. $x = 13$ cm



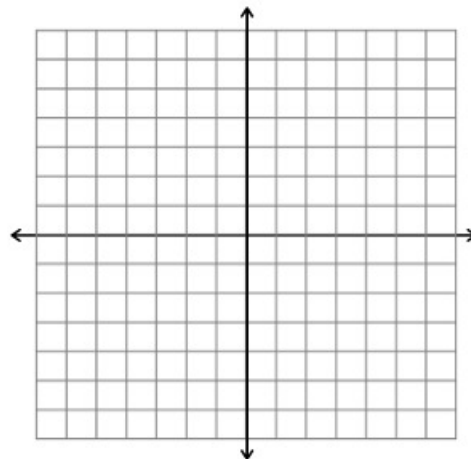
____18. The trapezoids pictured are similar. Find the value of x .

- A. $x = 10$ cm
- B. $x = 11$ cm
- C. $x = 12$ cm
- D. $x = 12.5$ cm

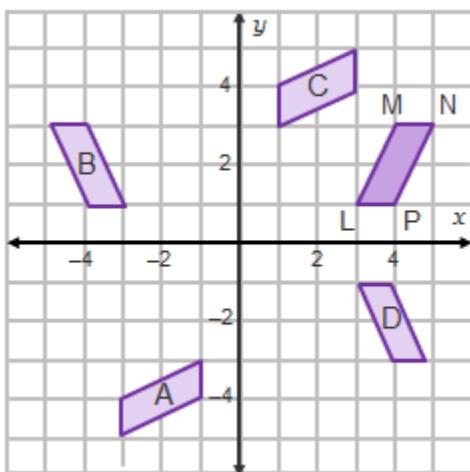


____19. The point $(-3,5)$ is translated four units right and two units down. What are the coordinates of the translated point?

- A. $(-5,9)$
- B. $(1,1)$
- C. $(1,3)$
- D. $(-7,7)$



____20. Which figure represents the image of parallelogram LMNP after a reflection across the y -axis?



- A. figure A
- B. figure B
- C. figure C
- D. figure D