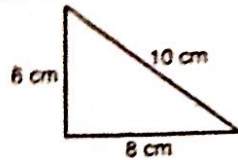


**Chapter Test**  
**Form A**

Circle the best answer.

1. What is the area of the triangle?



- A 24 cm<sup>2</sup>      C 48 cm<sup>2</sup>  
B 40 cm<sup>2</sup>      D 80 cm<sup>2</sup>

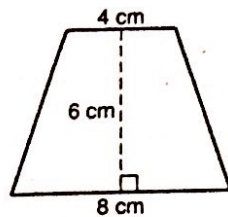
2. A parallelogram has an 8-inch base. If the parallelogram has an area of 64 square inches, what is the height of the parallelogram?

- A 4 in.      C 16 in.  
B 8 in.      D 56 in.

3. What is the area of a rhombus if one diagonal is 6 centimeters and the other diagonal is 8 centimeters?

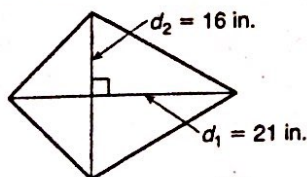
- A 7 cm<sup>2</sup>      C 24 cm<sup>2</sup>  
B 14 cm<sup>2</sup>      D 48 cm<sup>2</sup>

4. What is the area of the trapezoid?



- A 6 cm<sup>2</sup>      C 72 cm<sup>2</sup>  
B 36 cm<sup>2</sup>      D 192 cm<sup>2</sup>

5. What is the area of the kite?

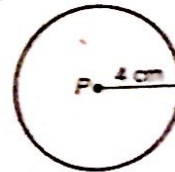


- A 18.5 in<sup>2</sup>      C 168 in<sup>2</sup>  
B 37 in<sup>2</sup>      D 336 in<sup>2</sup>

6. The area of a square is 25 square inches. What is the perimeter of the square?

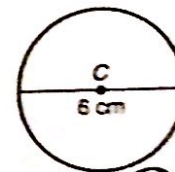
- A 10 in.      C 50 in.  
B 20 in.      D 100 in.

7. What is the circumference of  $\odot P$  in terms of  $\pi$ ?



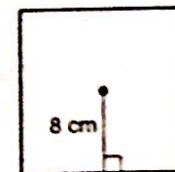
- A  $4\pi$  cm      C  $16\pi$  cm  
B  $8\pi$  cm      D  $64\pi$  cm

8. What is the area of  $\odot C$  in terms of  $\pi$ ?



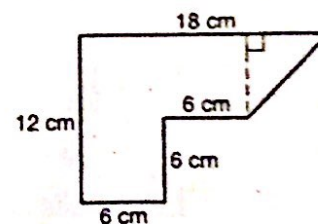
- A  $3\pi$  cm<sup>2</sup>      C  $9\pi$  cm<sup>2</sup>  
B  $6\pi$  cm<sup>2</sup>      D  $36\pi$  cm<sup>2</sup>

9. What is the area of the square?



- A 64 cm<sup>2</sup>      C 256 cm<sup>2</sup>  
B 128 cm<sup>2</sup>      D 512 cm<sup>2</sup>

10. What is the area of the figure?



- A 126 cm<sup>2</sup>      C 180 cm<sup>2</sup>  
B 162 cm<sup>2</sup>      D 216 cm<sup>2</sup>

**CHAPTER**
**9**
**Chapter Test**
**Form A** continued

11. Which is the best estimate for the shaded area of the figure? The grid has squares with side lengths of 1 inch.

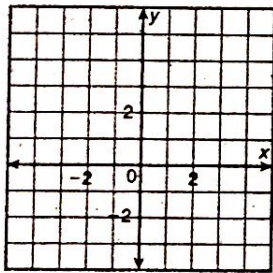

A  $2 \text{ in}^2$ 

C  $4 \text{ in}^2$ 
☒ B  $3 \text{ in}^2$ 

D  $5 \text{ in}^2$ 

Use the grids for Exercises 12–14.

12. What is the perimeter of square  $DEFG$  if the coordinates of  $D$  and  $E$  are  $D(0, -0)$  and  $E(3, 0)$ ?

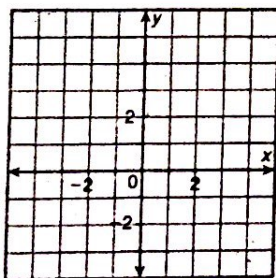

A  $9 \text{ units}^2$ 

C  $12 \text{ units}^2$ 

B 9 units

☒ D 12 units

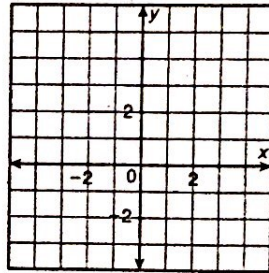
13. What is the area of the polygon with vertices  $W(-4, 2)$ ,  $X(1, 2)$ ,  $Y(1, -2)$ , and  $Z(-4, -2)$ ?


A  $18 \text{ units}^2$ 
☒ C  $20 \text{ units}^2$ 

B 18 units

D 20 units

14. What is the area of  $\triangle JKL$  if the coordinates of  $J$ ,  $K$ , and  $L$  are  $J(0, 0)$ ,  $K(0, 3)$ , and  $L(4, 0)$ ?


☒ A  $6 \text{ units}^2$ 

C  $12 \text{ units}^2$ 

B 6 units

D 12 units

15. If the radius of a circle is multiplied by 3, which is true?

☒ A The circumference is tripled.

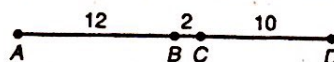
B The area is tripled.

16. What should you do if you want to double the area of a rectangle?

☒ A Double either the length or the width but not both.

B Double both the length and the width.

17. A point is chosen randomly on  $\overline{AD}$ . What is the probability that the point is on  $\overline{BC}$ ?


A  $\frac{1}{11}$ 

C  $\frac{11}{1}$ 
☒ B  $\frac{1}{12}$ 

D  $\frac{12}{1}$ 

18. A bus is scheduled to arrive at a bus stop every 20 minutes, and it stays at the stop for 2 minutes. What is the probability that the bus will be at the stop when you arrive?

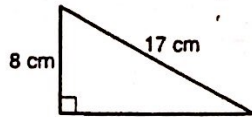
A 0.05

☒ B 0.1



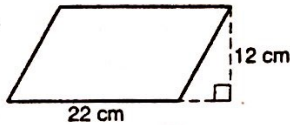
# **CHAPTER 9** **Chapter Test** **Form B**

1. Find the area of the triangle.



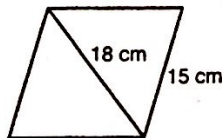
$$60 \text{ cm}^2$$

2. Find the area of the parallelogram.



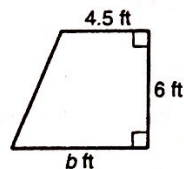
$$264 \text{ cm}^2$$

3. Find the area of the rhombus.



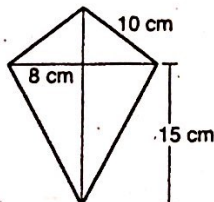
$$216 \text{ cm}^2$$

4. The area of the trapezoid is 34.5 square feet. Find the base.



$$7 \text{ ft}$$

5. Find the area of the kite.



$$168 \text{ cm}^2$$

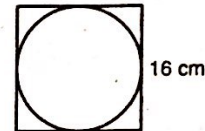
6. The perimeter of a rhombus is 40 inches. One diagonal is 12 inches. Find the area of the rhombus.

$$96 \text{ in}^2$$

7. Find the radius of  $\odot P$  in which  $C = 36\pi \text{ cm}$ .

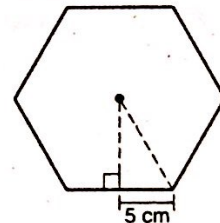
$$18 \text{ cm}$$

8. Given that the circle is inscribed in the square, find the area of the circle to the nearest hundredth.



$$201.06 \text{ cm}^2$$

9. Find the area of the regular polygon to the nearest tenth.



$$259.8 \text{ cm}^2$$

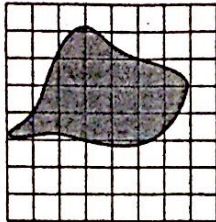
10. The figure is a semicircle with a radius of 8 inches. Find the area of the shaded part of the figure to the nearest hundredth.



$$35.53 \text{ in}^2$$

**CHAPTER**
**9**
**Chapter Test**
**Form B** continued

11. Estimate the area of the figure. The grid has squares with side lengths of 1 yard.



Somewhere between

$$16 \text{ yd}^2 + 18 \text{ yd}^2$$

12. Find the perimeter of the polygon with vertices  $A(-5, 2)$ ,  $B(1, 5)$ ,  $C(3, 1)$ , and  $D(-3, -2)$ . If necessary, leave your answer in simplest radical form.

$$10\sqrt{5} \approx 22.36 \text{ units}$$

13. Find the area of the polygon with vertices  $D(-1, 2)$ ,  $E(2, 2)$ ,  $F(2, -1)$ , and  $G(-3, -1)$ .

$$12 \text{ un}^2$$

14. Find the area of the circle centered at the origin that passes through the point  $(-3, 5)$ . Round your answer to the nearest tenth of a square unit.

$$r \approx 5.83 \text{ un}$$

$$A = 106.8 \text{ un}^2$$

15. The diameter of a circle is increased by a factor of 3. Describe the effect on the area of the circle.

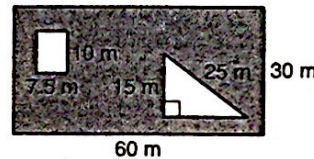
$$A_2 = A_1 \times 9$$

16. A square sandbox has an area of 8 square feet. If you want to double the area, what size should you make the sides of the new sandbox?

$$A_2 = A_1 \cdot 2 = 8 \cdot 2 = 16$$

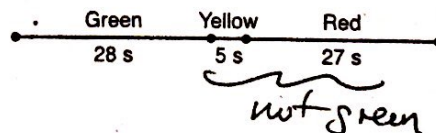
$$A_2 = 16 = s^2 \quad s = \sqrt{16} = 4 \text{ ft}$$

17. Find the probability that a point chosen randomly inside the 60-m-by-30-m rectangle will be inside either the small rectangle or the triangle.



$$\frac{1}{8} = \text{Prob. small rect} + \text{Prob. triangle}$$

18. A stoplight is green for 28 seconds, yellow for 5 seconds, and red for 27 seconds. What is the probability that the light will NOT be green when you arrive?



$$\text{Prob not green} = \frac{32}{60} = \frac{8}{15}$$

$$\approx 53\%$$