Area Measure QUESTIONS

Show an understanding of the information in this chapter by answering the questions and filling in the blanks below.

1. Area is the measure of the surface of a figure expressed in square units such as inches or feet. (True; False)

2. One square foot equals _____ square inches.

3. When calculating area, dimensions should be in the same units of measurement. (True; False)

4. The formula for finding the area of a rectangle and square is _____.

5. The formula for finding the area of a triangle is _____.

6. The two formulas for finding the area of a circle are _____ and _____.

7. Sectors are segments of the circumference of a circle. (True; False)

8. The side of a cylinder is referred to as the _____ area.

9. The area of a cylinder's side is calculated by multiplying the length times the:
   a. diameter of its base
   b. radius of its base
   c. circumference of its base
   d. the combined area of its top and base

10. If the angle of a sector is 90°, its relation to the total measure of the circle is:
    a. $\frac{1}{2}$
    b. $\frac{1}{3}$
    c. $\frac{1}{4}$
    d. $\frac{1}{8}$

11. The formula to calculate the area of a cube is:
    a. $4 \times \text{side}^2$
    b. $6 \times \text{side}^2$
    c. side^2
    d. side^3

12. The total surface area of a cylinder is:
- **a.** six times the width
- **b.** length times width times radius
- **c.** six times the length times radius
- **d.** the lateral area plus the area of top and base

13. How many square feet of drywall are needed to line the two sides and one end of a garage that is 28′ long, 12′ wide, and 8′ high?
- **a.** 152 sq. ft.
- **b.** 544 sq. ft.
- **c.** 640 sq. ft.
- **d.** 2,688 sq. ft.

14. What is the area of a 60° sector of a circle with an 8″ diameter?
- **a.** 8.4 sq. in.
- **b.** 10.7 sq. in.
- **c.** 33.5 sq. in.
- **d.** 201.1 sq. in.

15. An auditorium made up of a 40′ × 60′ rectangular area plus a semicircle on one 40′ end needs a new floor. How many square feet of flooring are needed?
- **a.** 2,431.4 sq. ft.
- **b.** 2,462.8 sq. ft.
- **c.** 3,028.3 sq. ft.
- **d.** 4,800 sq. ft.