

Area is the measurement of the surface within a plane (2 dimensional) figure. It may be helpful to think of painting or carpeting when you think of area. When you paint or carpet, you are covering the entire surface. Area is always expressed by square. (ex: square feet (sq ft or ft^2), square inches (sq in or in^2), etc.) Computing area involves the use of formulas. Formulas are equations that help you work math problems.

Squaring a number (x^2) means multiplying the number times itself as many times as the exponents indicate. (ex: $3^2 = 3 \times 3 = 9$)

Select the best answer for the following questions and type it on the line provided.

1. What is the area of a square with a side that measures 4.5 inches? _____
 - a. 20.25 in^2
 - b. 9 in^2
 - c. 18 in^2
 - d. 21 in^2
2. Mary wants to paint one wall of her bedroom a different color than the other 3 walls. She measured the wall at 12 feet high and 16 feet long. What is the area of the wall that Mary wants to paint? _____
 - a. 28 ft^2
 - b. 56 ft^2
 - c. 102 ft^2
 - d. 192 ft^2
3. What is the area of a circle with a diameter of 8 inches? _____
 - a. 12.48 in^2
 - b. 25.12 in^2
 - c. 50.24 in^2
 - d. 200.96 in^2
4. What is the radius of a circle that has an area of 200.96 square inches? _____
 - a. 4 inches
 - b. 5.5 inches
 - c. 7.5 inches
 - d. 8 inches
5. A square has an area of 100 ft^2 . What is the length of the sides? _____
 - a. 10 ft.
 - b. 12.5 ft.
 - c. 25 ft.
 - d. 50 ft.

6. A triangle has a base of 9 cm, a side length of 16 cm, and a height of 12 cm. What is the area of the triangle? _____
- a. 96 cm^2
 - b. 72 cm^2
 - c. 54 cm^2
 - d. 108 cm^2
7. A triangle has a base of 6 inches and a height of 10 inches. What formula below shows how to correctly find its area? _____
- a. $\frac{1}{2} \times 6 \times 10$
 - b. $\frac{1}{2} \times (6 \times 10)$
 - c. $(\frac{1}{2} \times 6) \times 10$
 - d. all of the above
8. When Todd measured his hallway for carpeting, he calculated a total area of 50 square feet. If the length of the hallway is 20 feet, what is the hallway's width? _____
- a. 25 ft.
 - b. 2.5 ft.
 - c. 30 ft.
 - d. 3.5 ft.