

SAT Area and Volume Worksheet

Name: _____ Date: _____

Circle one answer for each question. Use the blank space for calculations. A calculator is allowed.

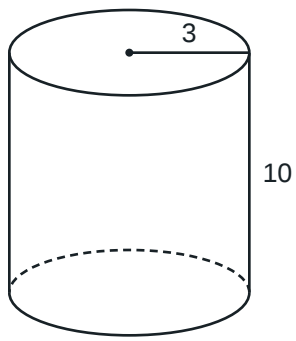
- 1. A rectangular prism has length 8 centimeters, width 3 centimeters, and height 5 centimeters. What is its volume, in cubic centimeters?**

A. 16
B. 79
C. 120
D. 158

- 2. A square has a perimeter of 36 feet. What is its area, in square feet?**

A. 36
B. 81
C. 144
D. 324

3.



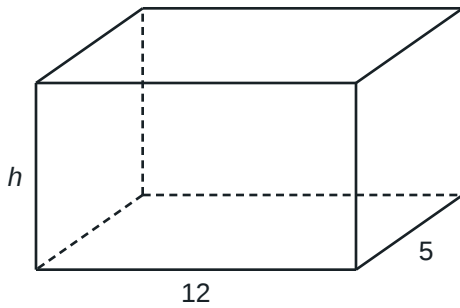
The right circular cylinder shown has radius 3 and height 10. What is its volume?

- A. 60π
- B. 90π
- C. 300π
- D. 360π

4. A cube has a volume of 64 cubic inches. What is its surface area, in square inches?

- A. 24
- B. 64
- C. 96
- D. 384

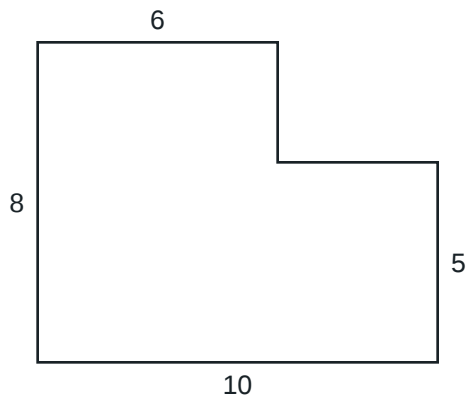
5.



The rectangular box shown has a volume of 360 cubic inches. The dimensions are in inches. What is the value of h ?

- A. 6
- B. 12
- C. 30
- D. 72

6.



The figure shows the floor plan of a room. All corners are right angles, and the lengths are in meters. What is the area of the floor, in square meters?

- A. 48
- B. 56
- C. 60
- D. 68

7. A rectangular patio measures 6 yards by 4 yards. What is its area, in square feet?
(1 yard = 3 feet)
- A. 24
 - B. 72
 - C. 144
 - D. 216
8. A right circular cone has radius 6 centimeters and height 5 centimeters. What is its volume, in cubic centimeters?
- A. 10π
 - B. 30π
 - C. 60π
 - D. 180π
9. Rectangle B is similar to rectangle A, and each side of rectangle B is 3 times as long as the corresponding side of rectangle A. The area of rectangle A is 12 square units. What is the area of rectangle B, in square units?
- A. 36
 - B. 48
 - C. 72
 - D. 108

10. A sphere has a volume of 36π cubic centimeters. What is the radius of the sphere, in centimeters?
- A. 3
 - B. 6
 - C. 9
 - D. 27
11. Cylinder A has radius r and height h . Cylinder B has radius $2r$ and height $\frac{h}{2}$. The volume of cylinder B is how many times the volume of cylinder A?
- A. 1
 - B. 2
 - C. 4
 - D. 8
12. A rectangular tank has a base 50 centimeters long and 40 centimeters wide and is partly filled with water. A solid cube with 10-centimeter edges is placed in the tank, where it sinks and is completely covered by the water. No water spills. By how many centimeters does the water level rise?
- A. 0.5
 - B. 1
 - C. 2
 - D. 10