1. Find the area of a right triangle whose legs have lengths 6 and 8.

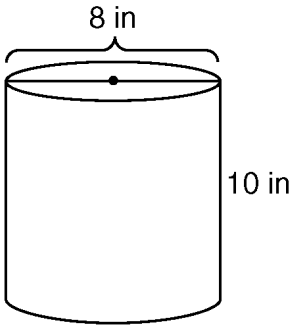
2. A box in the shape of a cube has a volume of 64 cubic inches. What is the length of a side of the box?

   (1) $21.\overline{3}$ in (2) 16 in (3) 8 in (4) 4 in

3. Find the number of square centimeters in the area of a triangle with a base of 10 centimeters and an altitude of 5 centimeters.

4. Find the area of a right triangle whose legs measure 5 and 12.

5. A storage container in the shape of a right circular cylinder is shown in the accompanying diagram.



   What is the volume of this container, to the *nearest hundredth*?

   (1) 56.55 in^3 (2) 125.66 in^3 (3) 251.33 in^3 (4) 502.65 in^3

6. The base of a right pentagonal prism has an area of 20 square inches. If the prism has an altitude of 8 inches, determine and state the volume of the prism, in cubic inches.

7. A fish tank in the shape of a rectangular prism has dimensions of 14 inches, 16 inches, and 10 inches. The tank contains 1680 cubic inches of water. What percent of the fish tank is empty?

   (1) 10 (2) 25 (3) 50 (4) 75

8. A shipping container is in the shape of a right rectangular prism with a length of 12 feet, a width of 8.5 feet, and a height of 4 feet. The container is completely filled with contents that weigh, on average, 0.25 pound per cubic foot. What is the weight, in pounds, of the contents in the container?

   (1) 1,632 (2) 408 (3) 102 (4) 92

9. A right prism has a square base with an area of 12 square meters. The volume of the prism is 84 cubic meters. Determine and state the height of the prism, in meters.

10. The Parkside Packing Company needs a rectangular shipping box. The box must have a length of 11 inches and a width of 8 inches. Find, to the *nearest tenth of an inch*, the minimum height of the box such that the volume is *at least* 800 cubic inches.

11. In the accompanying diagram, $\overleftarrow{AB}$ and $\overleftarrow{CD}$ intersect at *E*, and m$\angle AED = 3x + 15$. *If* $m\angle CEB = 2x + 45$, *find the value of x.*