

NAME: \_\_\_\_\_ PERIOD: \_\_\_\_\_ DATE: \_\_\_\_\_

Indicate whether each statement is (T) rue/(F)alse.

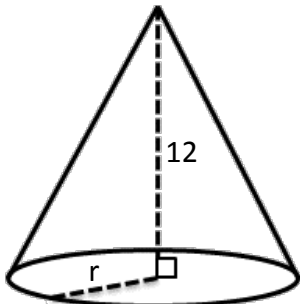
1. \_\_\_\_\_ The lateral faces of a prism are never triangles.
2. \_\_\_\_\_ An oblique rectangular prism is a hexahedron.
3. \_\_\_\_\_ If the density of a metal is  $\beta$  g/cm<sup>3</sup>, then a cube of the metal with a side length of 3 cm would weight  $27\beta$  grams.
4. \_\_\_\_\_ If  $C^2$  is the area of the base of a pyramid or a cone, and  $C$  is the height of the solid, then the formula for the volume of the solid is  $V = \frac{1}{3}C^3$ .
5. \_\_\_\_\_ The smallest cylindrical container for a sphere has a volume  $\frac{3}{2}$  times the volume of the sphere and a surface area  $\frac{3}{2}$  times the surface area of the sphere.

Answer the following.

6. The formula for the volume of a prism or cylinder: \_\_\_\_\_
7. The formula for the volume of a pyramid or cone: \_\_\_\_\_
8. The formula for the volume of a sphere: \_\_\_\_\_
9. The formula for the surface area of a sphere: \_\_\_\_\_
10. Density is defined as: \_\_\_\_\_

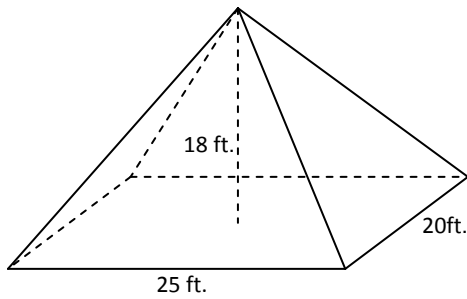
Solve the following problems.

11. Find  $r$ .  $V = 64\pi$  cm<sup>3</sup> \_\_\_\_\_



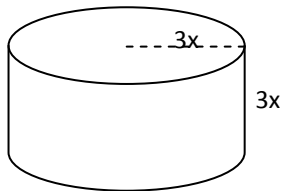
**Show Work & Indicate Correct Unit of Measure!**

12. Find the volume of the pyramid.



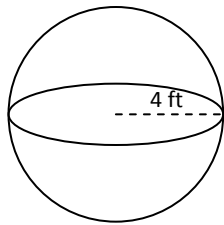
\_\_\_\_\_

13. Find the volume of the cylinder (in terms of the variable  $x$ ).



\_\_\_\_\_

14. Find the surface area ( $S$ ) and the volume ( $V$ ) of the sphere.



$S =$  \_\_\_\_\_

$V =$  \_\_\_\_\_

15. Timmy Hooligan has declared war against the neighborhood girls. He has decided to bombard them with water balloons. If the water balloons are 10 cm in diameter (assume that they are spherical), **A)** What is their volume? If water has a density of  $1 \text{ g/cm}^3$ , **B)** what does each balloon weigh? If his wagon has a capacity of 50 kg, **C)** how many water balloons can he carry?

A) \_\_\_\_\_

B) \_\_\_\_\_

C) \_\_\_\_\_