**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Teacher / Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Intermediate II *Unit 13 - 3D Figures Study Guide***

**Directions:** In problems 14- 16match each volume with its proper formula.

**1. \_\_\_\_**Volume of Cylinder

**2. \_\_\_\_**Volume of Cone

**3. \_\_\_\_**Volume of Sphere

**a.** $V= πr^{2}h$

**b.** $V= \frac{4}{3}πr^{3}$

**c.** $V= \frac{1}{3}πr^{2}h$

**Directions:** Answer the following questions.

**4.** The height of a cylinder is 10 cm and the radius is 4 cm. What is the Volume?

**5.** The height of a cone is 8 cm and the radius is 2 cm. What is the Volume?

**6.** The diameter of a sphere is 20 feet. What is the Volume?

**7.** The volume of a cone is 935.1 in³, if the radius is 7 inches, what is the HEIGHT?

**8.** The volume of a cylinder is 9982.3 cm³, if the height is 13 cm, what is the DIAMETER?

**9.** The volume of a sphere is 804.879 m³, what is the RADIUS?

**10.** Find the volume of the empty space in a cylindrical tube of three balls. The diameter of each ball is 2.75 inches. The cylinder is 2.75 inches in diameter and is 8.25 inches tall. Draw a picture and label each measurement.