



Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

### Volume Review #1 (page 1)

Write the formulas for the volume for each shape below:

1. Cylinder \_\_\_\_\_ Cone \_\_\_\_\_ Sphere \_\_\_\_\_

2. Describe how the formula for the volume of a cylinder is built from the base (area of a circle).

3. Find the volume of a cylinder whose height is 6 cm and the diameter of its base is 10 cm. Leave your answer in terms of pi.

3-D volume drawing:

Volume Formula:

Work:

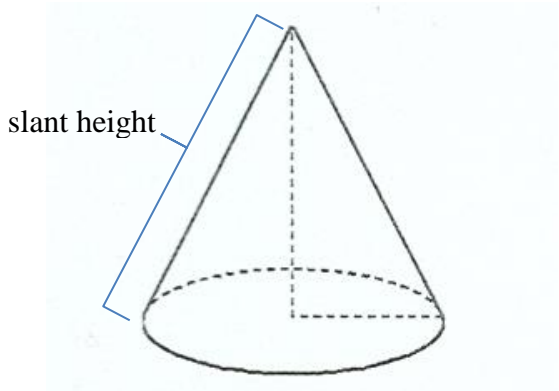
Answer:

4. The height of the cylinder above is 6 cm. A student states that doubling the height of the cylinder will double the volume of the original cylinder. Show or explain why the student is or is not correct.

## Volume Review #1 (page 2)

5. If the *slant* height of a right circular cone is 13 cm and the diameter of its base is 10 cm, what is its volume? Give your answer in terms of  $\pi$ .

What formula do you need to find the height of the cone? \_\_\_\_\_



Work:

Height of cone: \_\_\_\_\_

Formula for volume of a cone:

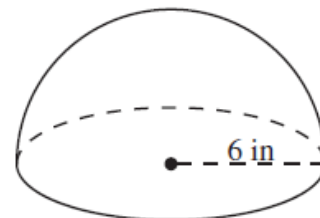
Work:

Answer:

- 
6. A bake shop makes a cake shaped like a hemisphere, as pictured.

What volume formula should you use?

What do you have to do to the answer once you find the volume?



cake

What is the volume, in cubic inches, of the cake? Leave your answers written in terms of  $\pi$ . Show your work below.