

Name \_\_\_\_\_

## 12.6 Volume of Cylinders

Formula: \_\_\_\_\_

Tell which cylinder has the greater volume.

1. Cylinder A:  $r = 36$  in,  $h = 54$  in;      Cylinder B:  $r = 30$  in.,  $h = 48.5$  in.

2. Cylinder C:  $r = 6$  ft,  $h = 10.5$  ft;      Cylinder D:  $r = 15$  ft,  $h = 12$  ft

Find the unknown radius, diameter, or height of the cylinder. Use 3.14 for  $\pi$ .

3.  $V = 351.68$  in.<sup>3</sup>

$$r = 4 \text{ in.}$$

$$h = \underline{\quad? \quad}$$

4.  $V = 125.6$  cm<sup>3</sup>

$$r = \underline{\quad? \quad}$$

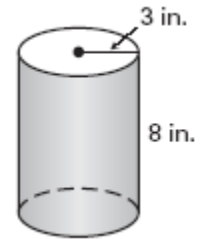
$$h = 10 \text{ cm}$$

5.  $V = 942$  mm<sup>3</sup>

$$r = 5 \text{ mm}$$

$$h = \underline{\quad? \quad}$$

6. A swimming pool is 48 **inches** deep and has a diameter of 15 **feet**. How much water, in cubic feet, would be needed to completely fill the pool?
7. Which of the following are possible dimensions of a cylinder that has a volume of about 250 cubic units?
- a.  $r = 8, h = 10$
  - b.  $r = 1, h = 4$
  - c.  $r = 2, h = 6$
  - d.  $r = 3, h = 9$
8. Ted poured water into the glass at the right. The water filled  $\frac{2}{3}$  of the glass. What is the volume of the water in the glass?



9. Find the volume of the cylinder if it is  $\frac{1}{2}$  full.

