

**Chapter 9:** Area and Volume  
**Lesson 9-3:** Cylinders and Cones  
**Homework**

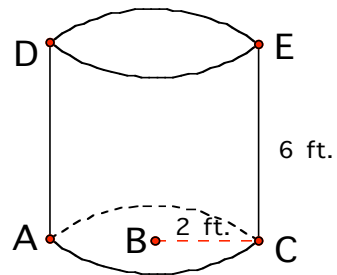
name \_\_\_\_\_  
date \_\_\_\_\_  
period \_\_\_\_

**Answer the following. Use 3.14 for  $\pi$  and round your answers to the nearest integer.**

- 1) In a cylinder, if the diameter is 6 cm. and the height is 8 cm., then the volume is \_\_\_\_\_.
- 2) In a cylinder, if the diameter is 8 cm. and the height is 4 cm., then the volume is \_\_\_\_\_.
- 3) In a cylinder, if the radius is 16 cm. and the height is 6 cm., then the volume is \_\_\_\_\_.
- 4) In a cylinder, if the radius is 2 cm. and the height is 6 cm., then the volume is \_\_\_\_\_.
- 5) In a cylinder, if the area of the base is  $15\pi$  cm<sup>2</sup> and the height is 4 cm., then the volume is \_\_\_\_\_.
- 6) In a cylinder, if the volume is 628 cm<sup>3</sup> and the radius is 10 cm, then the height is \_\_\_\_\_.
- 7) In a cylinder, if the volume is  $64\pi$  cm<sup>3</sup> and the radius is 2 cm, then the height is \_\_\_\_\_.
- 8) In a cylinder, if the volume is  $48\pi$  cm<sup>3</sup> and the diameter is 8 cm, then the height is \_\_\_\_\_.
- 9) In a cylinder, if the volume is 314 cm<sup>3</sup> and the diameter is 10 cm, then the height is \_\_\_\_\_.
- 10) In a cylinder, if the lateral area is  $16\pi$  cm<sup>2</sup> and the radius is 10 cm, then the height is \_\_\_\_\_.
- 11) In a cylinder, if the radius is 10 mm. and the height is 3 mm., then the total surface area is \_\_\_\_\_.
- 12) In a cylinder, if the radius is 2 in. and the height is 6 in., then the total surface area is \_\_\_\_\_.
- 13) In a cylinder, if the diameter is 10 mm. and the height is 5 mm., then the total surface area is \_\_\_\_\_.
- 14) In a cylinder, if the diameter is 8 cm. and the height is 3 cm., then the total surface area is \_\_\_\_\_.
- 15) In a cylinder, if the area of the base is  $36\pi$  cm<sup>2</sup> and the height is 3 cm., then the total surface area is \_\_\_\_\_.

16) One can of corn (A) is twice as tall as another (B), but only half as wide. Which can holds more corn; can A or can B? Show a diagram of both cans and the equations used to solve this problem.

17) What is the exact lateral area of the cylinder?



18) What is the exact area of the base of the cylinder above?

19) If the volume of a cone is  $400\pi$  in. and height is 8 in., what is the exact area of the base?

20) For problem #19, find the radius of the base.

21) For a cone, if the radius is 6 cm. and the slant height is 12 cm, then the exact lateral area is \_\_\_\_

22) For a cone, if the diameter is 10 in and the slant height is 8 cm, then the exact lateral area is \_\_\_\_.

23) For a cone, if the height is 5 mm. and the radius is 3mm, then the exact volume is \_\_\_\_.

24) For a cone, if the height is 8 cm. and the diameter is 8 cm, then the exact volume is \_\_\_\_.

25) For a cone, if the radius is 4 in and the slant height is 10 in, then the exact total surface area is \_\_\_\_.