

Unit 5, Lesson 13: The Volume of a Cylinder

1. Match each set of information about a circle with the area of that circle.

a) Circle A has a radius of 4 units.

1. 4π square units

b) Circle B has a radius of 10 units.

2. approximately 314 square units

c) Circle C has a diameter of 16 units.

3. 64π square units

d) Circle D has a circumference of 4π units.

4. 16π square units

2. a) Sketch a cylinder to the right.

b) Label its radius 3 and its height 10.

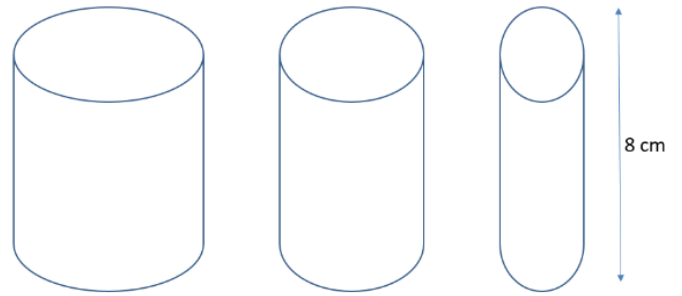
c) Shade in one of its bases.

3. At a farm, animals are fed bales of hay and buckets of grain. Each bale of hay is in the shape a **rectangular prism**. The base has side lengths 2 feet and 3 feet, and the height is 5 feet. Each bucket of grain is a **cylinder** with a diameter of 3 feet. The height of the bucket is 5 feet, the same as the height of the bale.

a) Which is larger in area, the rectangular base of the bale or the circular base of the bucket? Explain how you know.

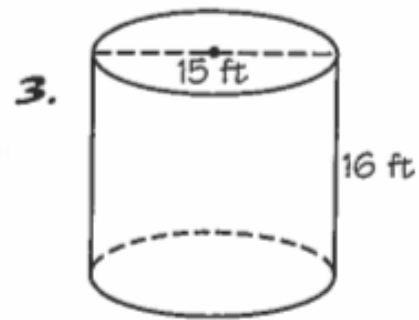
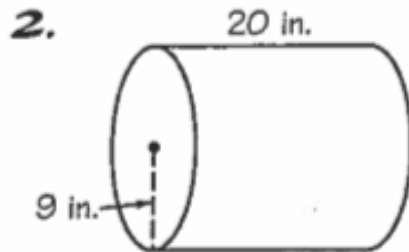
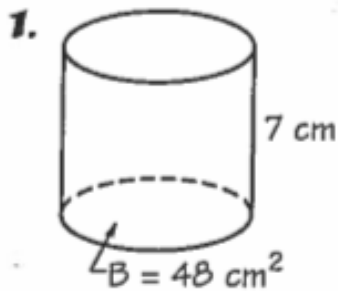
b) Which is larger in volume, the bale or the bucket? Explain how you know.

4. Three cylinders have a height of 8 cm. Cylinder 1 has a radius of 1 cm. Cylinder 2 has a radius of 2 cm. Cylinder 3 has a radius of 3 cm. **Find the volume of each cylinder.**

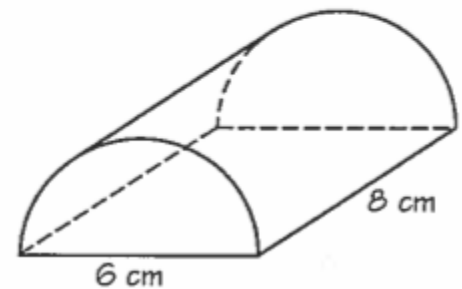


5)

Find the volume of the cylinder.



- 11.** The paperweight shown below is made of glass with a density of 3.5 grams per cubic centimeter. How much does the paperweight weigh?



- 9.** Jo was comparing two cylinders that both had a radius of 5 cm. The first had a height of 10 cm, and the other a height of 20 cm. How many times greater was the volume of the larger cylinder?