Section 3.3 Extra Practice

1. Calculate the volume of each cone, to the nearest unit.

a)

20 mm

8 mm

b)

8 in.

16 in.
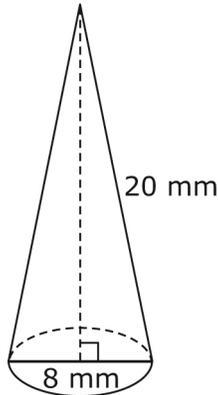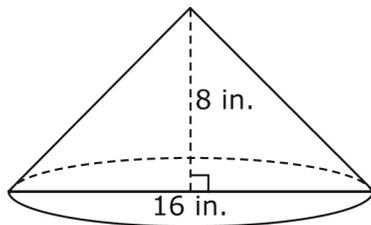
2. For each cone in #1, determine the volume of a cylinder that has the same diameter and the same height.

3. a) For the cone in #1a), determine the volume of a cone that has the same diameter and twice the height.

b) How many times greater is the volume of the larger cone than the volume of the smaller one?

4. a) For the cone in #1b), determine the volume of a cone that has the same height and twice the diameter.

b) How many times greater is the volume of the larger cone than the volume of the smaller cone?

5. Road salt is stored in a conical pile. Calculate the volume of a salt pile if it has a diameter of 12 m and a height of 4 m.

6. A child is pouring sand on the beach and forming a cone-shaped mound. Calculate the volume of sand in a mound that has a 13-inch diameter and a height of 5 in.

7. To plan the heating system for a room, a contractor needs to calculate the room's air capacity. Calculate the air capacity of a room with a 10-foot ceiling and the following floor layout.


10 ft

16 ft

8 ft

20 ft
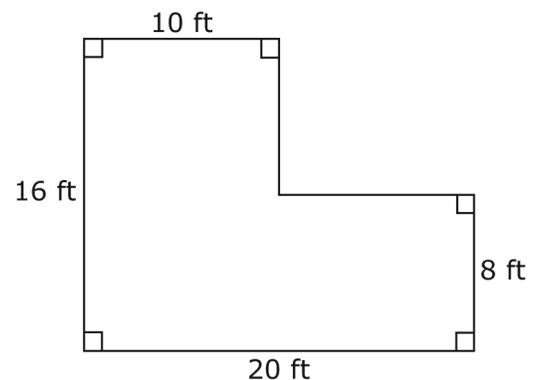
8. Identify the individual 3-D figures that make up the composite shape of each birdhouse.

a)

32 cm

24 cm

8 cm

8 cm

c)

16 cm

16 cm

16 cm

←16 cm→

16 cm

20 cm

2 cm

←20 cm→
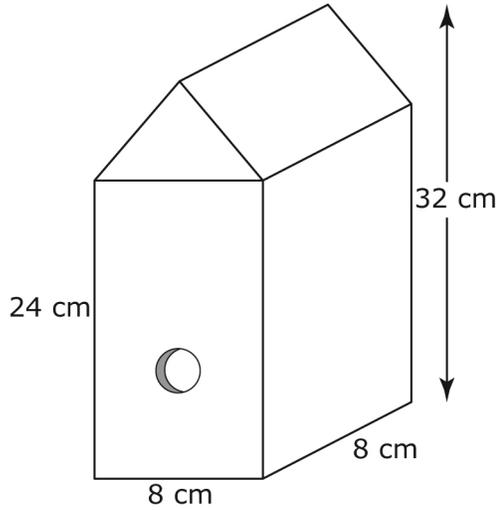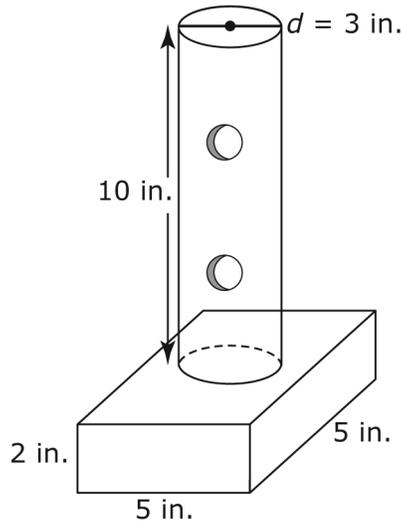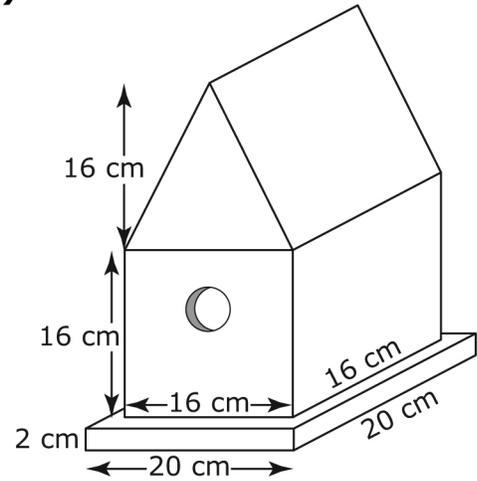
9. Calculate the volume of each birdhouse in #8.

b)

d = 3 in.

10 in.

2 in.

5 in.

5 in.

10. Calculate the volume of the greenhouse.

10 ft

3 ft

12 ft

16 ft