

Additional Practice

Investigation 4

Filling and Wrapping

1. Find the volume of each of the following:
 - a. a sphere with a radius of 4 centimeters

 - b. a cone with a height of 10 inches and a base of radius 3 inches

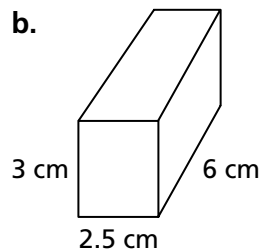
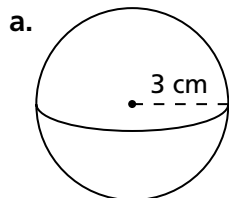
 - c. a cylinder with a base area of 10π square centimeters and a height of 25 centimeters

 - d. a sphere with a diameter of 100 centimeters

 - e. a cylinder with a radius of 14 inches and a height of 1.5 feet

 - f. a cone with a base area of 11.5π square centimeters and a height of 20 centimeters

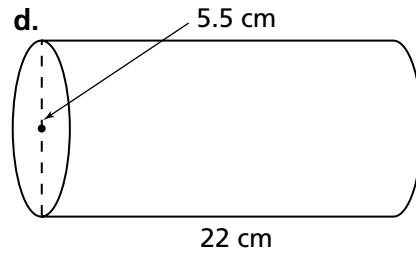
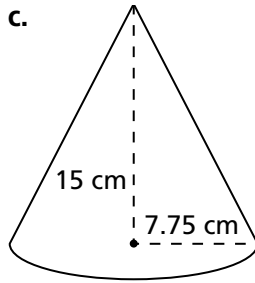
2. Find the volume of each of the following figures.



Additional Practice *(continued)*

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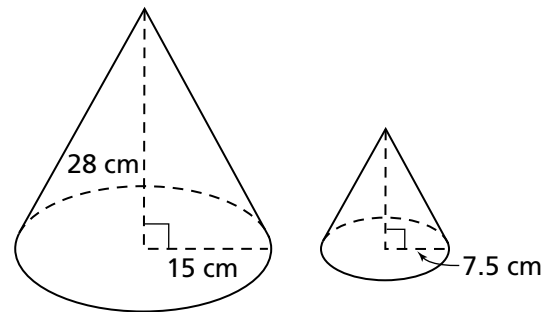
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3. a. A tepee is a conical shaped tent used for shelter by the Plains Indians of North America. Suppose a tepee has a radius of 9 ft and is 10 ft high. How much floor space does the tepee have?

b. What is the volume of the tepee?

4. a. Assuming the two cones at the right are similar, what is the height of the smaller cone?



b. What is the volume of the larger cone?

c. What is the volume of the smaller cone?

d. Angie is using the smaller cone to scoop popcorn into the larger cone. How many scoops from the smaller cone will it take to fill the larger cone?

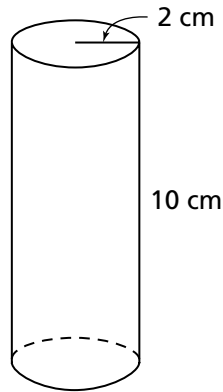
Additional Practice *(continued)*

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5. A sphere has a diameter of 4 m. What is its volume?

6. a. Find the volume of this cylinder:



b. What is the volume if the height is doubled?

c. What is the volume if the radius of the base is doubled?

d. What is the volume if both the height and the radius of the base are doubled?