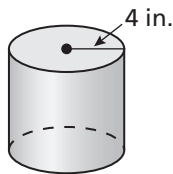


## 1.2 Practice B

- A cylindrical container with a radius of 8 centimeters is filled to a height of 10 centimeters with sulfuric acid. The density of sulfuric acid is 1.84 grams per cubic centimeter. What is the mass of the sulfuric acid to the nearest gram?
- A block of ice is in the shape of a square with side lengths of 0.4 meter.
  - The ice has a density of 917 kilograms per cubic meter. Find the mass of the block of ice to the nearest kilogram.
  - The side length of the block of ice decreases by 0.05 meter this week. How many cubic centimeters of ice does the block lose? The side length decreases at a constant rate for the next 5 weeks. Does the block of ice lose the same amount of ice each week? Explain.

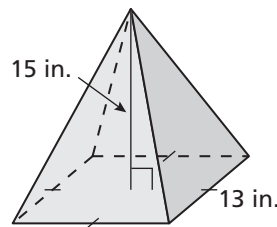
**In Exercises 3 and 4, describe how the change affects the volume of the prism or pyramid.**

- multiplying the radius by  $\frac{3}{2}$



$$V = 112\pi \text{ in.}^3$$

- tripling all the linear dimensions



- A cone has height  $h$  and a base with radius  $r$ . You want to change the cone so its volume is halved. What is the new height if you only change the height? What is the new radius if you only change the radius? Explain.
- A 10 karat gold paper weight has a volume of 125 cubic centimeters. The paper weight consists of 41.7% gold and 58.3% other metal. The density of gold is 19,300 kilograms per cubic meter. The density of the other metal is 7140 kilograms per cubic meter.
  - What is the mass of the gold in the paper weight to the nearest tenth of a kilogram?
  - What is the mass of the other metal in the paper weight to the nearest tenth of a kilogram?
  - What is the total mass of the paper weight?
  - What is the total density of the paper weight in kilograms per cubic meter?