

# Volume Problems

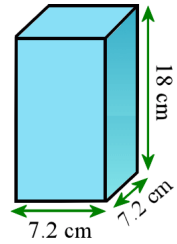
You can use a calculator in all the problems in this lesson.



1. a. Calculate the volume of this carton to the nearest cubic centimeter.

b. Considering that 1 milliliter = 1 cubic centimeter, what is the volume of the carton in milliliters?

c. The carton is 96% full of juice. How many milliliters of juice does it contain?



2. A company builds cube-shaped storage boxes where the edge of a cube measures half a meter.

a. Work in meters, and using *fractions*. Calculate the volume of one such box in cubic meters.

b. Now work in centimeters and calculate the volume of one such box in cubic centimeters.

c. How many storage boxes are needed to have a total volume of one cubic meter?

3. Alex built a wooden crate (in the shape of a rectangular prism) measuring 0.4 m by 0.9 m, and 0.5 m high. He will fill it with dirt and plant flowers in it. In the local garden center, 40-liter bags of garden soil cost \$34.

a. If Alex only used soil from the bags, how many bags would he need to buy to fill his crate?

b. How much would those cost him?

$$1 \text{ m}^3 = 1,000 \text{ L}$$