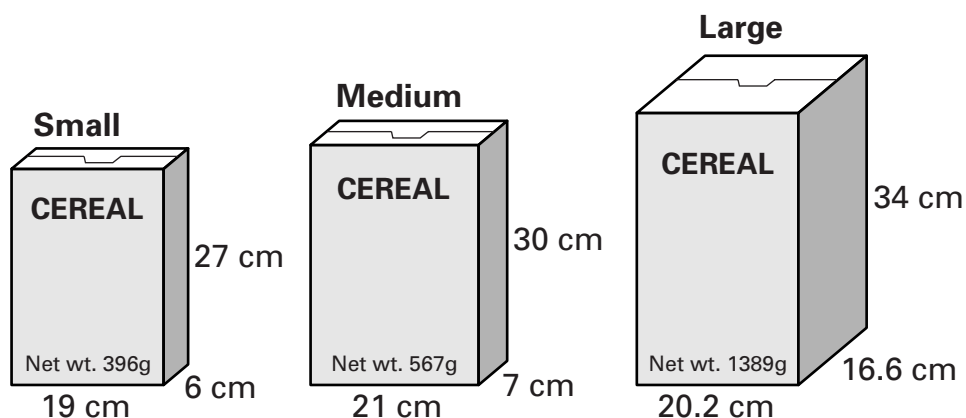NAME _____ DATE _____

Application Lesson Opener

For use with pages 743–749

Grocery stores are filled with many sizes and shapes of prisms
(boxes) and cylinders (cans) filled with food products. The size
and shape of a container determines its *volume* (the number of cubic
units contained in its interior).

1. A type of cereal is available in the three different boxes shown.
Find the volume *V* of each box in cubic centimeters, using the
formula *V* = length • width • height. Are the net weights
proportional to the volumes? Should they be? Explain.

Small

CEREAL

Net wt. 396g

27 cm

6 cm

19 cm

Medium

CEREAL

Net wt. 567g

30 cm

7 cm

21 cm

Large

CEREAL

Net wt. 1389g

34 cm

16.6 cm

20.2 cm

2. A type of chili is available in the three different cans shown.
Find the volume *V* of each can in cubic centimeters, using
the formula $V = \pi \cdot (\text{radius})^2 \cdot \text{height}$. Are the net weights
proportional to the volumes? Should they be? Explain.

Small

CHILI

Net wt.
425g

10.7 cm

7.2 cm

Large

CHILI

Net wt. 1130g

14.8 cm

9.8 cm

Jumbo

CHILI

Net wt. 3062g

17 cm

15.2 cm