

Lesson 5-5 • Apply Day

Reinforce Understanding

Missing and Fractional Edges

I can find the volume of a rectangular prism with whole-number edges using $\text{length} \times \text{width} \times \text{height}$.

Worked model

A box has a volume of 336 in^3 . It is 8 in. wide and 6 in. tall. Find its length.

1. Substitute what you know. $V = l \times w \times h \rightarrow 336 = l \times 8 \times 6$
2. Multiply the two edges you already know. $8 \times 6 = 48$
3. Divide the volume by that product. $336 \div 48 = 7$

Answer: The length of the box is 7 inches.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Find the volume of a new prism with dimensions 5 by 3 by 2.

Complete each step, then write the final answer.

1. Base area: $5 \times 3 = \underline{\hspace{1cm}}$.
2. Volume: $15 \times 2 = \underline{\hspace{1cm}}$.
3. Label the answer in $\underline{\hspace{1cm}}$ units.

Answer: $\underline{\hspace{3cm}}$

2. Find the volume of a new prism with dimensions 6 by 5 by 5.

Complete each step, then write the final answer.

1. Base area: $6 \times 5 = \underline{\hspace{1cm}}$.
2. Volume: $30 \times 5 = \underline{\hspace{1cm}}$.
3. Label the answer in $\underline{\hspace{1cm}}$ units.

Answer: $\underline{\hspace{3cm}}$

3. Find the volume of a new prism with dimensions 7 by 7 by 3.

Complete each step, then write the final answer.

1. Base area: $7 \times 7 = \underline{\hspace{1cm}}$.
2. Volume: $49 \times 3 = \underline{\hspace{1cm}}$.
3. Label the answer in $\underline{\hspace{1cm}}$ units.

Answer: $\underline{\hspace{3cm}}$