

# 1.33

## Volume of a Rectangular Solid

### • Example 1

A crate has dimensions 3 ft by 4 ft by 2 ft. Find its volume.

#### Solution

We are not particularly worried about which is the length, which is the width, and which is the height, since the order in which we multiply won't change the result.

Use the formula  $V = L \cdot W \cdot H$ , with  $L$ ,  $W$ , and  $H$  expressed in ft and  $V$  expressed in  $\text{ft}^3$ .

$$\begin{aligned} V &= L \cdot W \cdot H \\ &= 4 \times 3 \times 2 \\ &= 24 \end{aligned}$$

The volume is 24  $\text{ft}^3$ .

#### ● ● ● CHECK YOURSELF 1

A room is 15 ft long, 10 ft wide, and 8 ft high. What is its volume?

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#### ● ● ● CHECK YOURSELF ANSWER

1. 1200  $\text{ft}^3$ .

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# 1.33 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

Find the volume of each rectangular solid shown.

