


# 15.3 Independent Practice

CA CC 6.EE.7, 6.G.2

HW # 57 3-10



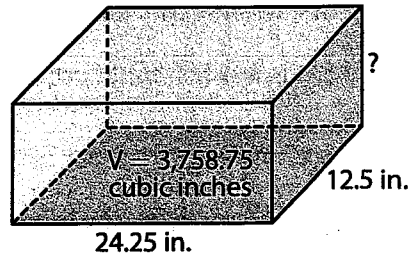
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3. Jala has an aquarium in the shape of a rectangular prism with the dimensions shown. What is the height of the aquarium?

Height = \_\_\_\_\_



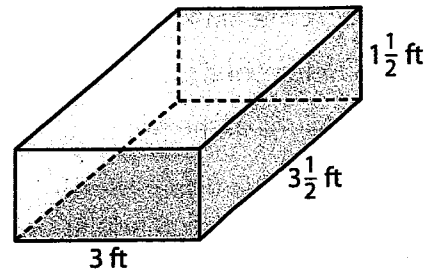
4. The area of the base of a rectangular juice box is  $4\frac{1}{2}$  square inches. If the volume of the box is 18 cubic inches, how tall is the box?

Height = \_\_\_\_\_

5. A box of cereal is shaped like a rectangular prism. The box is 20 centimeters long and 30 centimeters high. Its volume is 3,600 cubic centimeters. Find the width of the box.

Width = \_\_\_\_\_

6. About 7.5 gallons of water fill up 1 cubic foot of space. How many gallons of water will fill a goldfish pool shaped like the prism shown?



7. **Physical Science** A small bar of gold is a rectangular prism that measures 40 millimeters by 25 millimeters by 2 millimeters. One cubic millimeter of gold weighs about 0.0005 ounce. Find the volume in cubic millimeters and the weight in ounces of this small bar of gold.

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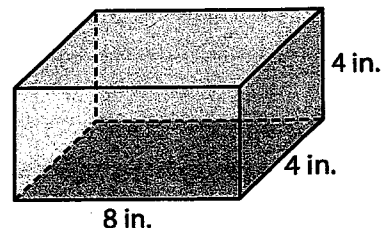
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8. **History** A typical stone on the lowest level of the Great Pyramid in Egypt was a rectangular prism 5 feet long by 5 feet high by 6 feet deep and weighed 15 tons. What was the volume of the average stone? How much did one cubic foot of this stone weigh?

\_\_\_\_\_

9. Hank has cards that are 8 inches by 4 inches. A stack of these cards fits inside the box shown and uses 32 cubic inches of volume. How tall is the stack of cards? What percent of the box's volume is taken up by the cards?

\_\_\_\_\_



10. A freshwater fish is healthiest when there is at least 1 gallon of water for every inch of its body length. Roshel wants to put a goldfish that is about  $2\frac{1}{2}$  inches long in her tank. Roshel's tank is 7 inches long, 5 inches wide, and 7 inches high. The volume of 1 gallon of water is about 231 cubic inches.

a. How many gallons of water would Roshel need for the fish? \_\_\_\_\_

b. What is the volume of Roshel's tank? \_\_\_\_\_

c. Is her fish tank large enough for the fish? Explain. \_\_\_\_\_

\_\_\_\_\_

**H.O.T.** FOCUS ON HIGHER ORDER THINKING

11. **Multistep** Larry has a clay brick that is 7 inches long, 3.5 inches wide, and 1.75 inches thick, the same size as the gold stored in Fort Knox in the form of gold bars. Find the volume of this brick. If the weight of the clay in the brick is 0.1 pound per cubic inch and the weight of the gold is 0.7 pound per cubic inch, find the weight of the brick and the gold bar. Round all answers the nearest tenth.

Volume of the brick or bar = \_\_\_\_\_ cubic inches

Weight of the brick = \_\_\_\_\_ pounds

Weight of the gold bar = \_\_\_\_\_ pounds

12. **Represent Real-World Problems** Luisa's toaster oven, which is in the shape of a rectangular prism, has a base that is 55 cm long by 40 cm wide. It is 30 cm high. Luisa wants to buy a different oven with the same volume but a smaller length, so it will fit better on her kitchen counter. What is a possible set of dimensions for this different oven?

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\_\_\_\_\_

13. **Persevere in Problem Solving** The volume of a rectangular prism is 64 cubic inches. The prism is 4 inches high, and the ratio of the length of a base to the width of the base is 4 : 1. What are the dimensions of the base of the prism? Explain your reasoning.

\_\_\_\_\_  
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14. **Communicate Mathematical Ideas** The volume of a cube is 27 cubic inches. What is the length of an edge? Explain.

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Work Area