Finding the Volume of a Rectangular Prism

**SKILLS**

Find the volume of each rectangular prism.

1. 8 units 4 units
   
   3 units
   
   Volume = ________________

2. 4 in. 2 in.
   
   3 in.
   
   Volume = ________________

3. 6 in. 2 in.
   
   3 in.
   
   Volume = ________________

4. 5 ft 3 ft
   
   5 ft
   
   Volume = ________________

5. 5 ft 5 ft
   
   10 ft
   
   Volume = ________________

6. 4 in. 2 in.
   
   5 in.
   
   Volume = ________________

7. 10 ft 3 ft
   
   10 ft
   
   Volume = ________________

8. 6 m 2 m
   
   8 m
   
   Volume = ________________

9. 4 ft 8 ft
   
   3 ft
   
   Volume = ________________

Volume = length × width × height
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CRITICAL THINKING AND PROBLEM SOLVING

10. You bought a CD-portable stereo for your brother's birthday. The stereo is shaped like a rectangular prism that is 15 inches long by 10 inches wide by 6 inches high. You must send it to him, so you put it in a box that is 18 inches long, 12 inches wide, and 8 inches high. How many cubic inches of packing material will you need? (Hint: Find the difference between the volume of the box and the volume of the stereo.)

You will need ________ cubic inches of packing material.

11. You buy a small music box shaped like a rectangular prism that is packed in a box that is 5 inches high, 4 inches wide, and 4 inches long. If you send it to a friend in a box that is 6 inches high, 7 inches wide, and 8 inches long, how much packing material will you need?

You will need ________ cubic inches.

12. What is the volume of a crate, shaped like a rectangular prism, that measures 15 inches high, 15 inches wide, and 18 inches long?

The volume is ________________.

13. You want to buy enough sand to fill a rectangular sandbox halfway. The sand box is 4 feet long, 3 feet wide, and 1 foot high. How much sand is needed to fill it halfway?

You will need ________________ of sand.

14. The volume of a rectangular prism is 90 cubic inches, the length is 6 inches, and the width is 5 inches. What is the height?

The height is ________________.

15. Describe what a cubic inch looks like.

________________________________________

16. What is the difference between volume and area?

________________________________________