Name: _____

Practice & Problem Solving ✏️ ⏻

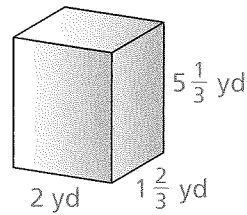**In 10–13, find the volume of each rectangular prism.**

10.

1.2 m
6.5 m
4 m

11.

$5\frac{1}{3}$ yd
2 yd
$1\frac{2}{3}$ yd

12.

$3\frac{1}{3}$ ft
$3\frac{1}{3}$ ft
$3\frac{1}{3}$ ft

13.

2.4 m
0.7 m
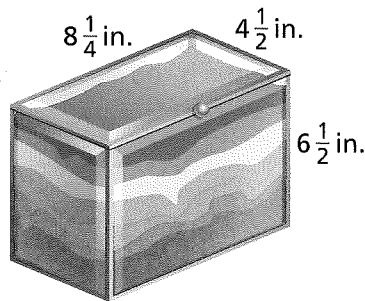0.9 m
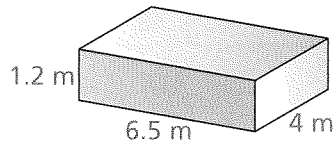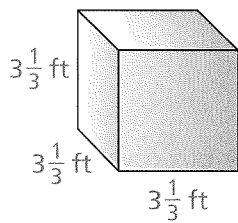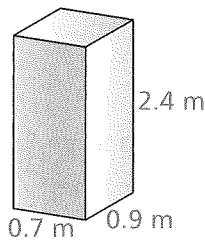
14. A clear box has the shape of a rectangular prism and is filled with sand. Find the volume of the box.

$8\frac{1}{4}$ in.
$4\frac{1}{2}$ in.
$6\frac{1}{2}$ in.

15. Use Structure A rectangular prism has a length of $2\frac{1}{2}$ yd, a width of $1\frac{1}{2}$ yd, and a height of $1\frac{1}{2}$ yd. You use cubes with fractional edge lengths of $\frac{1}{2}$ yd to find the volume. How many cubes are there for each of the length, width, and height of the prism? What is the volume of the prism?

16. A gift box has the shape of a cube. The length of each side is 10.5 cm. What is the volume of the gift box?

17. A school locker has a length of 1 ft, a width of 18 in., and a height of $2\frac{1}{2}$ ft. What is the volume of the locker in cubic feet?

18 in.
1 ft
$2\frac{1}{2}$ ft
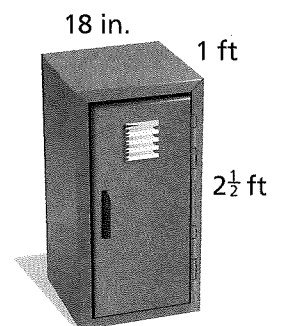
In 18 and 19, use the table.

18. **Use Structure** Sandy has two boxes with the dimensions shown. She wants to use the box with the greater volume to ship a gift to her friend. Which box should Sandy use? Explain.

	Length	Width	Height
Box A	$7\frac{1}{2}$ in.	2 in.	$11\frac{1}{2}$ in.
Box B	9 in.	$2\frac{1}{4}$ in.	$8\frac{1}{2}$ in.

19. Sandy finds a third box, box C, that has a length of 8 inches, a width of $2\frac{3}{4}$ inches, and a height of $10\frac{1}{2}$ inches. If Sandy wants to use the box with the greatest volume, should she use box C? Explain.

20. The volume of a large crate is 84 yd³. It is $2\frac{2}{3}$ yd wide and $4\frac{2}{3}$ yd high. What is the length of the crate?

21. **Higher Order Thinking** A box covers an area of $8\frac{3}{4}$ in.² when resting on its base. The volume of the box is $74\frac{3}{8}$ in.³. Can you find the surface area of the box? Explain.

22. **Make Sense and Persevere** A gold bar is similar in shape to a rectangular prism. A standard mint bar is approximately 7 in. × $3\frac{5}{8}$ in. × $1\frac{3}{4}$ in. If the value of gold is $1,313 per ounce, about how much is one gold bar worth? Use the formula $w \approx 11.15n$, where w is the weight in ounces and n is the volume in cubic inches, to find the weight in ounces. Explain how you found your answer.

✅ Assessment Practice

23. Find the volume of the prism.

$2\frac{1}{2}$ in.

$1\frac{3}{4}$ in.

4 in.