Determine the Volume of Rectangular Prisms

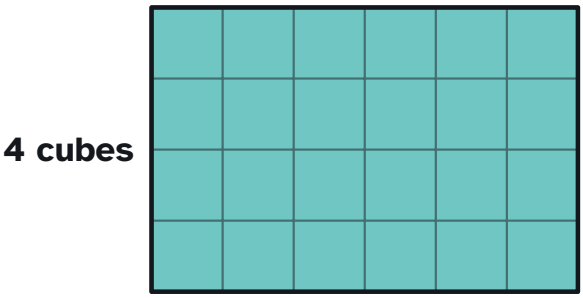
Find the volume of a box by multiplying its length, width, and height.

Name _____ **Date** _____

Tonight's spark

A class fills a time capsule box. The box is 6 units long, 4 units wide, and 3 units tall. Each small cube is 1 unit on every side. How many cubes fit inside?

Guess first: more or fewer than 50 cubes?



Our class model: layers of cubes

Try it

Work it out on paper. Write one answer on each line.

1 **What does volume measure?**

A. The distance around a shape **B.** How much space is inside a solid

C. The area of one face **D.** The length of one edge

My answer _____

2 **A box is 4 units long, 3 units wide and 2 units tall. What is its volume?**

A. 9 cubic units **B.** 12 cubic units **C.** 24 cubic units

My answer _____

3 **A box is measured in centimeters. What unit goes with its volume?**

A. cm^3 **B.** cm **C.** cm^2

My answer _____

4 **A box has a base area of 20 square feet and a height of 3 feet. What is its volume?**

A. 23 cubic feet **B.** 60 cubic feet **C.** 17 cubic feet

My answer _____

5 **A box is 10 in. long, 2 in. wide and 5 in. tall. What is its volume?**

A. 17 in^3 **B.** 20 in^3 **C.** 50 in^3 **D.** 100 in^3

My answer _____

Talk about it

Why is the volume written in cubic units instead of square units?

Home mission

Find a small box, like a tissue box. Pretend its edges are 3, 3 and 2 units. Can your student say how many unit cubes fill it? Why is the answer in cubic units?

If we get stuck, ask

- What are the three numbers — the length, the width, and the height?
- Let's multiply two of them first, then multiply by the third.
- What units should the answer have? Why cubic?

Do it on a screen

Scan or type the link. Same lesson, with hints.

eduwonderlab.com/lessons/5-5/homework.html

How did it feel? (optional)

Tricky Getting there Got it