Volume of Rectangular Prisms

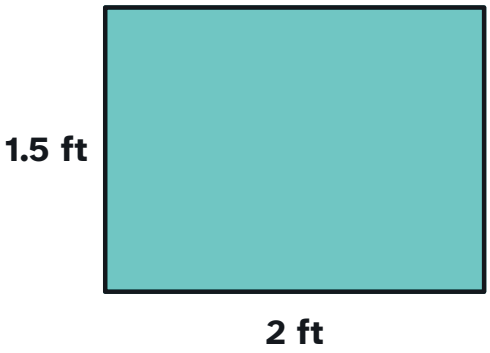
Find the volume of a box, even when an edge is a fraction or a decimal.

Name _____ **Date** _____

Tonight's spark

A class packs a time capsule box. It is 2 feet long, 1.5 feet wide and 1 foot tall. The class wants to know how much fits inside. How many cubic feet is the capsule?

Guess first: is it more than 4 cubic feet, or less?



Our class model: base area times height

Try it

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

1 **A box has a length of 4 and a width of 3. What is its base area?**

A. 7 **B.** 12 **C.** 14 **D.** 24

My answer _____

2 **A box has a base area of 10 cm² and a height of 3 cm. What is its volume?**

A. 13 cm^3 **B.** 7 cm^3 **C.** 30 cm^3

My answer _____

3 **A box is 4 ft long, 2 ft wide and 1.5 ft tall. What is its volume?**

A. 8 cubic ft **B.** 16 cubic ft **C.** 7.5 cubic ft **D.** 12 cubic ft

My answer _____

4 **A box is 6 in. long, 4 in. wide and 1/2 in. tall. What is its volume?**

A. 12 in^3 **B.** 24 in^3 **C.** 10.5 in^3 **D.** 48 in^3

My answer _____

5 **A box has a base area of 12 m^2 and a height of 2.5 m. What is its volume?**

A. 24 m^3 **B.** 14.5 m^3 **C.** 30 m^3 **D.** 36 m^3

My answer _____

6 **A fish tank is 2 ft long, 1 ft wide and 1.5 ft tall. What is its volume?**

A. 2 cubic ft **B.** 3 cubic ft **C.** 4 cubic ft **D.** 4.5 cubic ft

My answer _____

Talk about it

What is the base area, and what do you multiply it by to get the volume?

Home mission

Find a shoebox or a snack box. Measure each edge to the nearest half unit, like 7.5. Multiply the three edges out loud. Does a half change the steps?

If we get stuck, ask

- What are the three dimensions of the box?
- Does a fraction or decimal change the rule? No — we still multiply.
- What does 0.5 (or one half) mean here?

Do it on a screen

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

eduwonderlab.com/lessons/5-10/homework.html

How did it feel? (optional)

Tricky Getting there Got it