Unit 1, Lesson 10

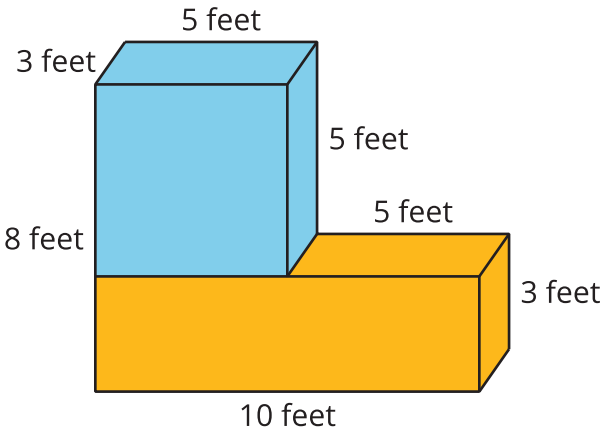
Represent Volume with Expressions

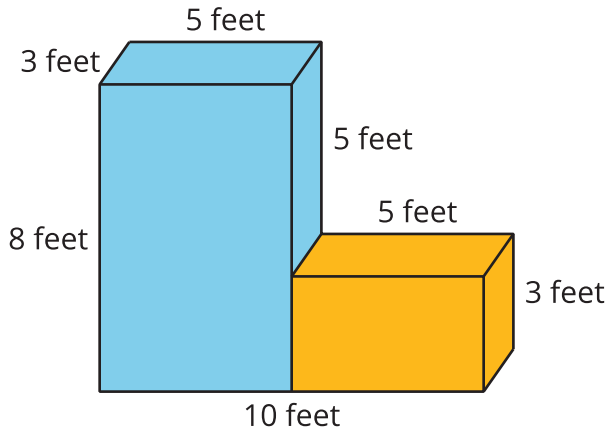
Let's write expressions for the volumes of figures.

Warm-up

Notice and Wonder: Prism Pieces

What do you notice? What do you wonder?

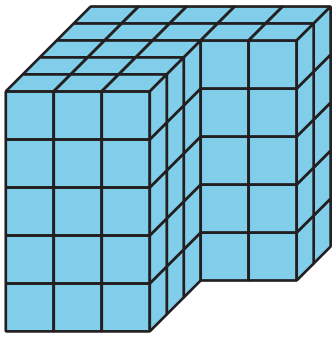




Activity 1

Compare Expressions

1. Write an expression to represent the volume of the figure in unit cubes.



2. Compare expressions with your partner.
   a. How are they alike?

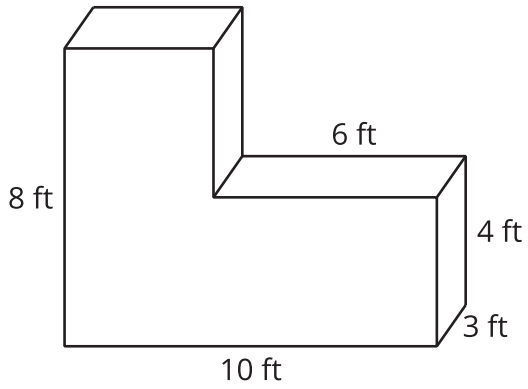
   b. How are they different?

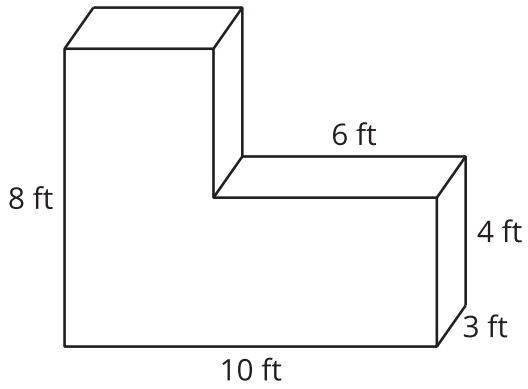
3. If they are the same, try to find another way to represent the volume.

Activity 2

Find the Volume in Different Ways

1. Find the volume by decomposing the figure in as many ways as you can. Show your thinking. Organize your work so it can be followed by others.





2. Write expressions to represent each way that you decompose the figure.

3. Mai used this expression to find the volume of the figure:

$$(10 \times 8 \times 3) - (6 \times 4 \times 3).$$

Use the diagram to interpret Mai's expression. Show your thinking. Organize your work so it can be followed by others.