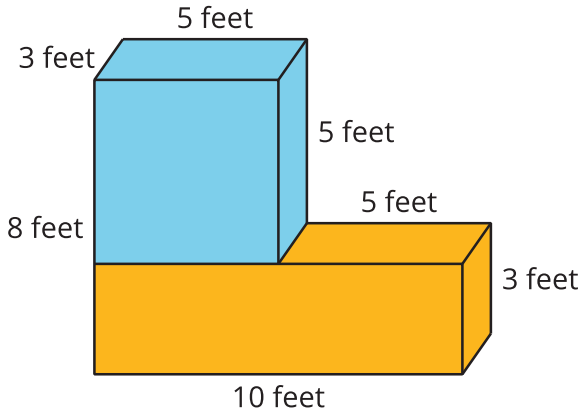
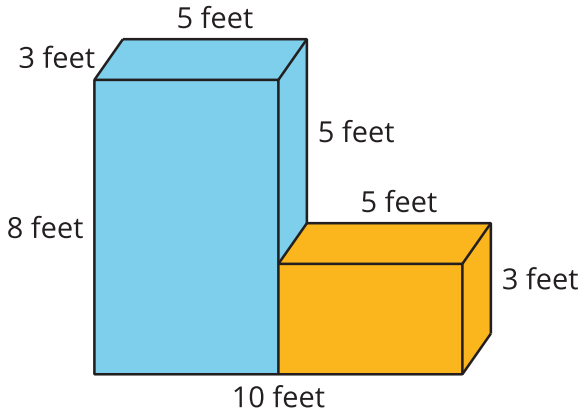
Lesson 10: Represent Volume with Expressions

- Let's write expressions for the volume of figures.

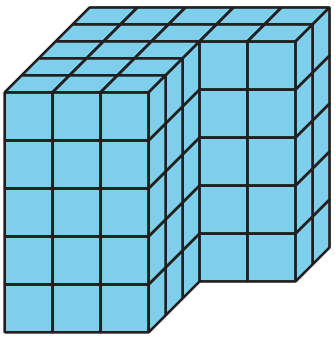
Warm-up: Notice and Wonder: Prism Pieces

What do you notice? What do you wonder?





10.1: Compare Expressions



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

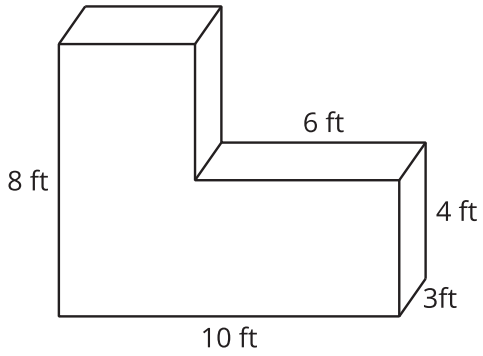
2. Compare expressions with your partner.
   a. How are they the same?

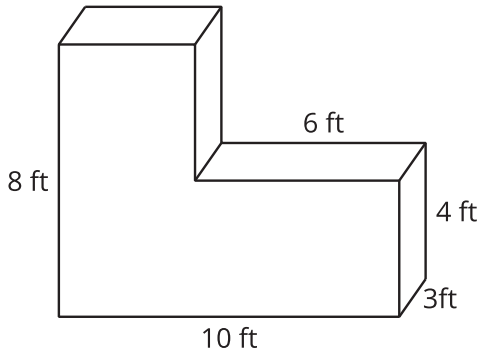
   b. How are they different?

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

10.2: Find the Volume in Different Ways

1. Find the volume of the figure by decomposing the figure 2 different ways. Show your thinking. Organize it so it can be followed by others.





2. For each way you decomposed the figure, write an expression that represents the volume.

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 it so it can be followed by others.