

Dear Parents,

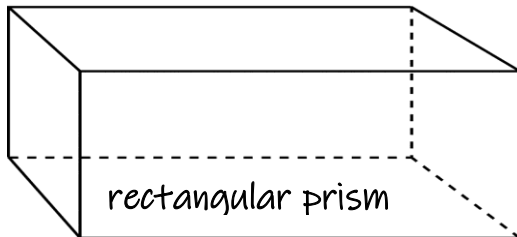
Over the next few weeks, we will be learning about **volume** in math! The information below will help you to support your child as they learn these exciting, yet important fifth grade math skills.

### The GOAL:

By the end of the unit, your child should be able to solve real world and mathematical problems involving volume.

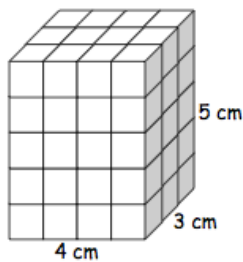
Grade 5 Math: PA Core Math Standards in Unit 4

CC.3.4.5.A.5: Apply concepts of volume to solve problems and relate volume to multiplication and to addition.



### What is volume?

**Volume** is the amount of **space** that a three-dimensional figure occupies. This space is measured in **cubic units** (for example:  $\text{cm}^3$ ).



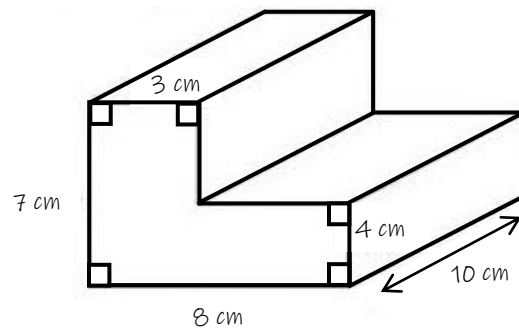
You can use a formula to find the volume of a shape. The formula to find the volume of a rectangular prism is:

$$\text{length } (l) \times \text{width } (w) \times \text{height } (h). \\ (V = l \times w \times h)$$

The volume of this rectangular prism is:  
 $4 \times 3 \times 5 = 60$  cubic cm.

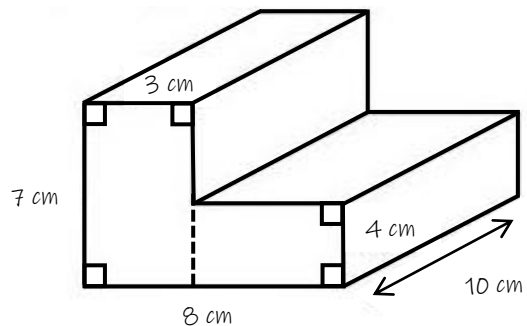
### Composite Figures

A composite figure is made up of two rectangular prisms that are combined.



In order to find the volume of a composite figure, you must:

**Step 1:** Break apart the figure into rectangular prisms. (In this shape, there are two rectangular prisms.)



**Step 2:** Use the formula to find the volume of each rectangular prism.

$$(7 \times 3 \times 10 = 210) + (5 \times 4 \times 10 = 200) = 410$$

**Step 3:** Add both of the volumes together in order to find the total volume of the composite figure.

The volume of this figure is 410 cubic cm.