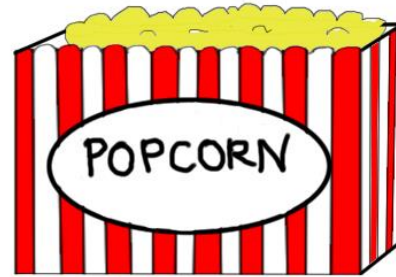


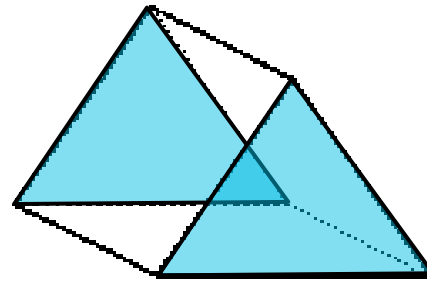
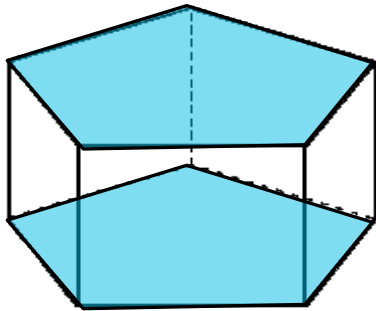
How can you determine
which box can hold more
popcorn?



In this lesson you will learn how
to compute volume by
multiplying the area of the base
times the height.

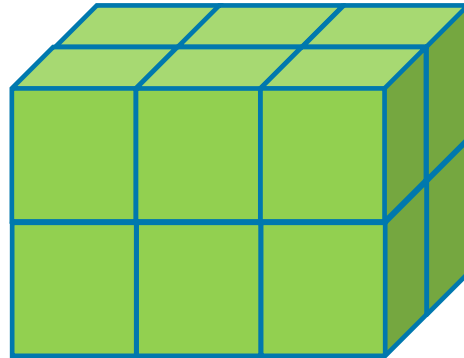
Let's Review

A prism is a three-dimensional figure with two parallel and congruent polygonal bases.



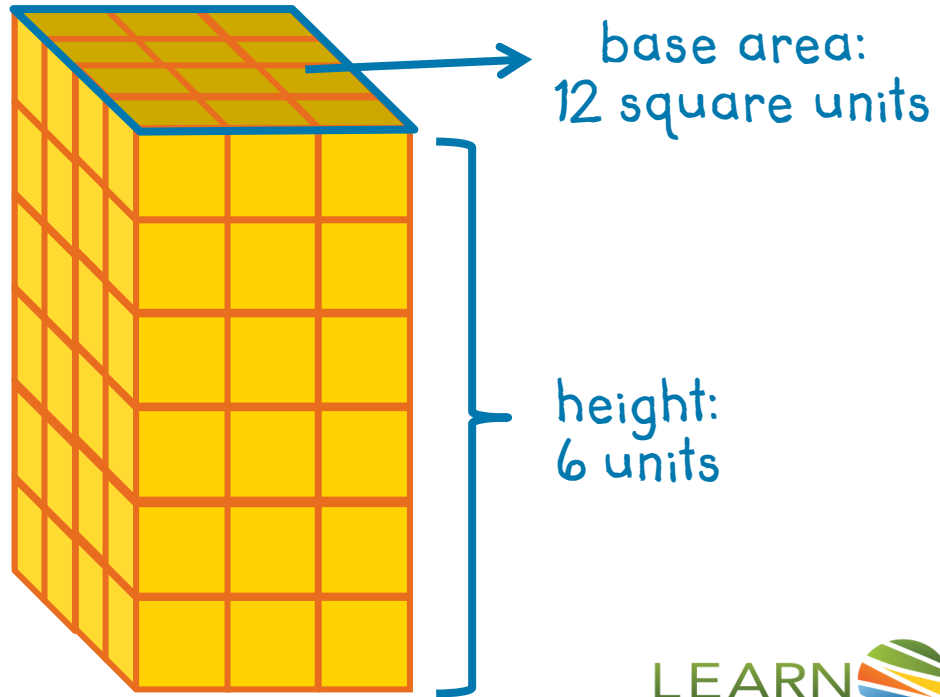
Let's Review

Volume is the number of cubic units needed to fill the space inside a three-dimensional figure.

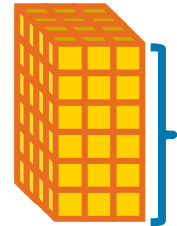
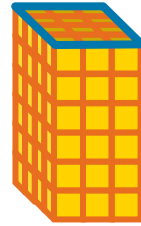
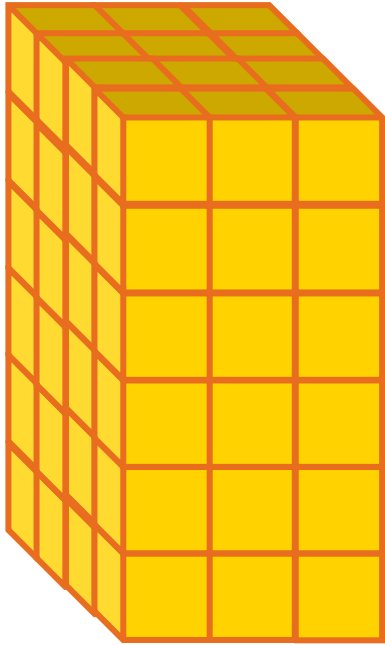


Core Lesson

What is the volume?



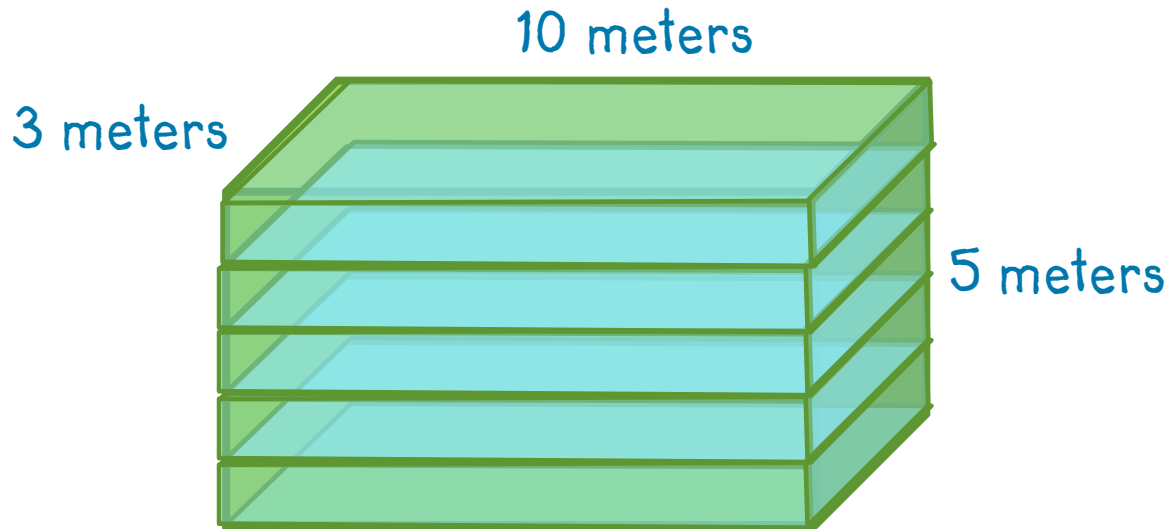
Core Lesson



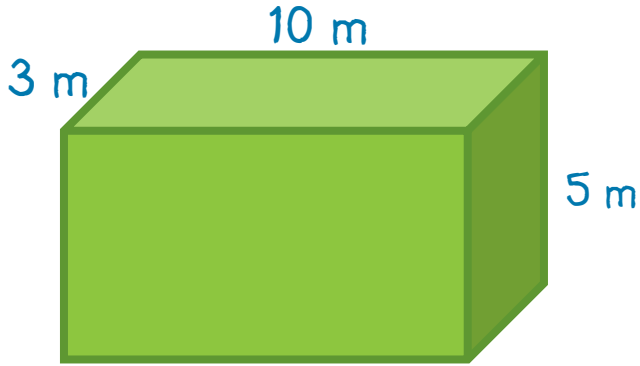
$$\begin{aligned}\text{Volume} &= \text{Base} \cdot \text{height} \\ &= (L \cdot W) \cdot h \\ &= (4 \cdot 3) \cdot 6 \\ &= 12 \cdot 6\end{aligned}$$

The figure has a volume of 72 cubic units.

Core Lesson



Core Lesson



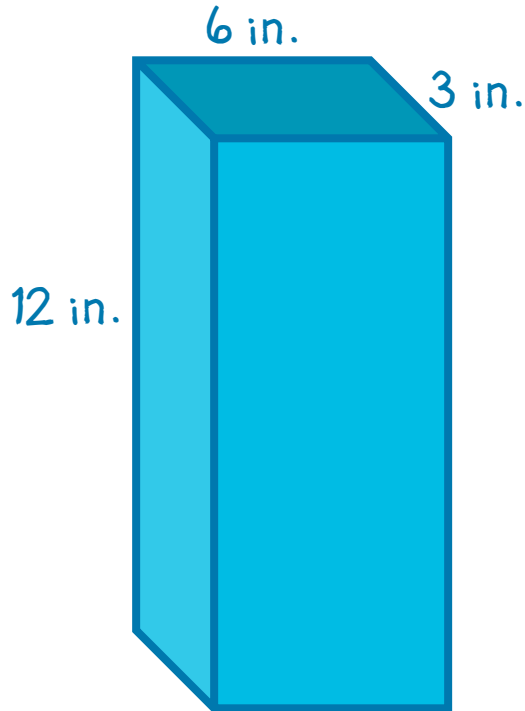
$$\begin{aligned}\text{Volume} &= \text{Base} \cdot \text{height} \\ &= (L \cdot W) \cdot h \\ &= (3 \cdot 10) \cdot 5 \\ &= 30 \cdot 5\end{aligned}$$

The figure has a volume of 150 cubic units.

In this lesson you have learned how to compute volume by multiplying the area of the base times the height.

Guided Practice

What is the volume?



$$\begin{aligned}\text{Volume} &= \text{Base} \cdot \text{height} \\ &= (L \cdot W) \cdot h \\ &= (6 \cdot 3) \cdot 12 \\ &= 18 \cdot 12\end{aligned}$$

The figure has a volume of 216 cubic inches.

Extension Activities

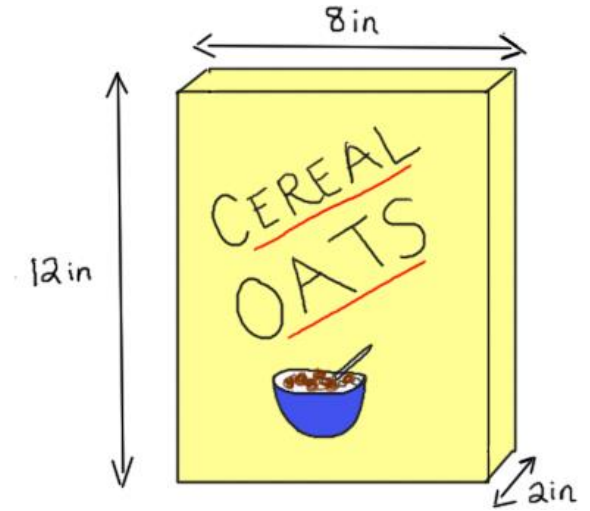
Loose leaf paper is usually 8.5 inches by 11 inches. A cellophane-wrapped package of 350 pieces of loose leaf paper has a height of 1 inch.

What is the volume of a stack of 1,050 stacks of loose leaf?

Extension Activities

There are about 14 cubic inches in one cup.

How many cups of cereal would fit into this box?



Quick Quiz

How many layers tall is the structure to the right? What is the volume of one layer?

What is the volume of the structure? Explain how you know.

