

Name: _____

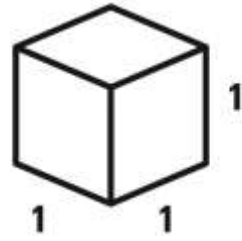
Block: _____

Volume, Nets, and Surface Area

The cube shown to the right represents the unit cube.

It has the dimensions 1 by 1 by 1.

Color the faces of the unit cube *blue*.



What is the volume of the cube? $1 \times 1 \times 1 =$ _____ cubic unit

The rectangular prism in *Figure 1* is made up of some unit cubes as well as other cubes that have been cut in half.

What are the dimensions of Figure 1?

$2\frac{1}{2}$ by _____ by _____

Color the faces of the unit cubes *blue*.

Color the faces of the $\frac{1}{2}$ cubes *green*.

How many uncut (unit) cubes are in the figure?

How many $\frac{1}{2}$ cubes are in the figure? _____

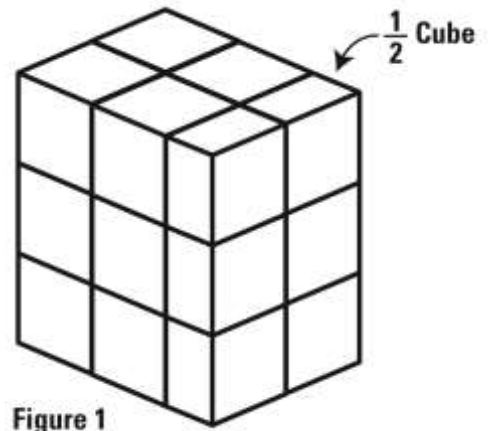


Figure 1

Without using the formula for finding volume, explain how you could find the volume of the prism.

Now show how to find the volume using the formula.

The rectangular prism in *Figure 2* is made up of some unit cubes, some $\frac{1}{2}$ cubes and some $\frac{1}{4}$ cubes.

What are the dimensions of Figure 2?

_____ by _____ by $2\frac{1}{2}$

Color the faces of the unit cubes *blue*.

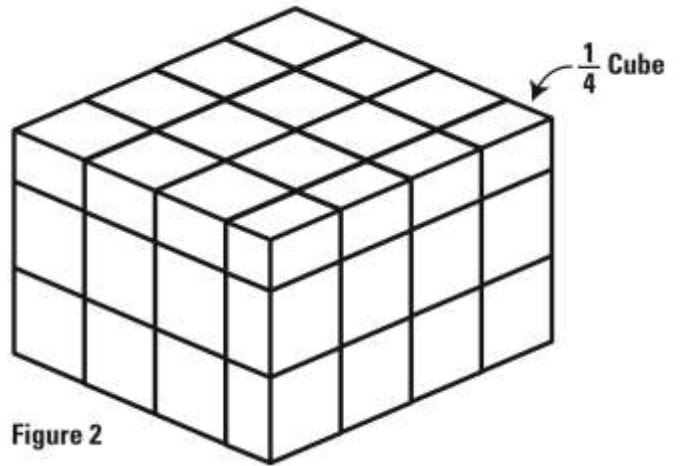
Color the faces of the $\frac{1}{2}$ cubes *green*.

Color the faces of the $\frac{1}{4}$ cubes *red*.

How many unit cubes are in the figure?

How many $\frac{1}{2}$ cubes are in the figure? _____

How many $\frac{1}{4}$ cubes are in the figure? _____



Without using the formula for finding volume, explain how you could find the volume of the prism.

Now show how to find the volume using the formula.

The rectangular prism in *Figure 3* is made up of unit cubes, $\frac{1}{2}$ cubes, $\frac{1}{4}$ cubes and $\frac{1}{8}$ cubes.

What are the dimensions of Figure 3?

_____ by _____ by $4\frac{1}{2}$

Color the faces of the unit cubes *blue*.

Color the faces of the $\frac{1}{2}$ cubes *green*.

Color the faces of the $\frac{1}{4}$ cubes *red*.

Color the faces of the $\frac{1}{8}$ cube *yellow*.

How many unit cubes are in the figure?

How many $\frac{1}{2}$ cubes are in the figure? _____

How many $\frac{1}{4}$ cubes are in the figure? _____

How many $\frac{1}{8}$ cubes are in the figure? _____

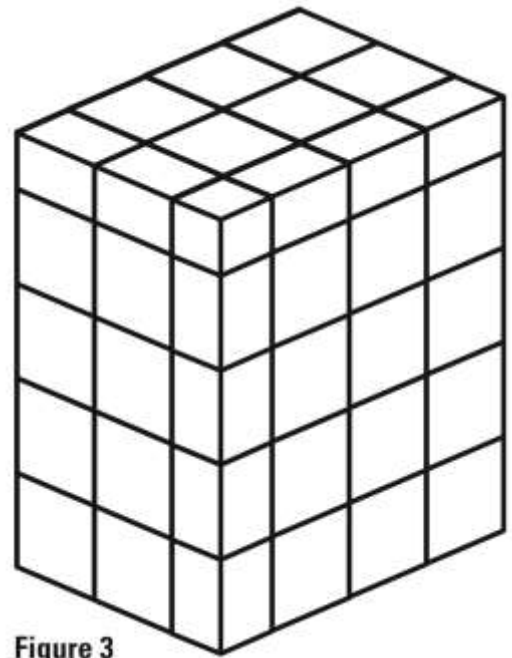


Figure 3

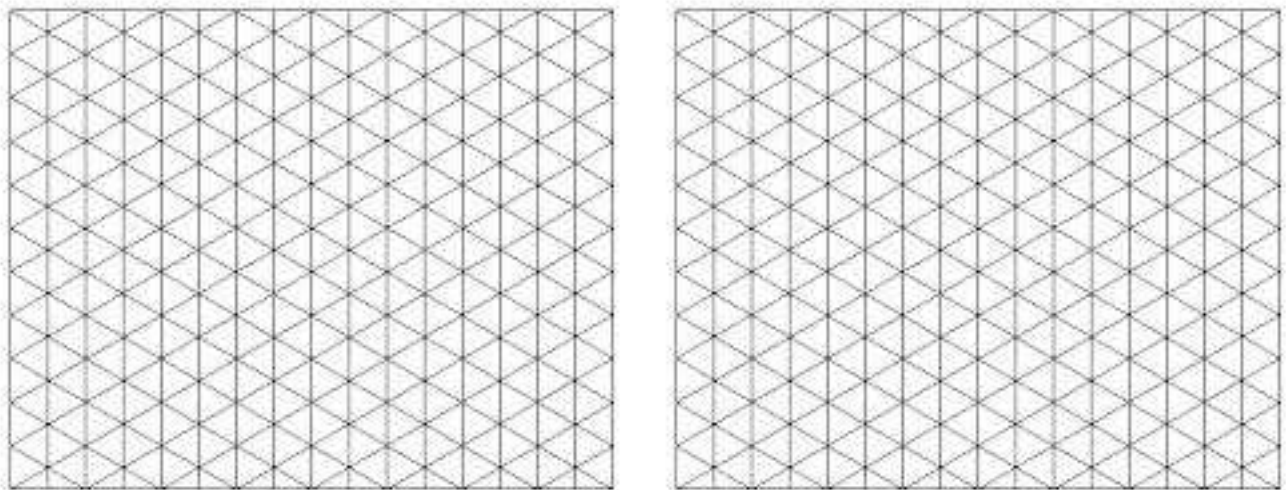
Without using the formula for finding volume, explain how you could find the volume of the prism.

Now show how to find the volume using the formula.

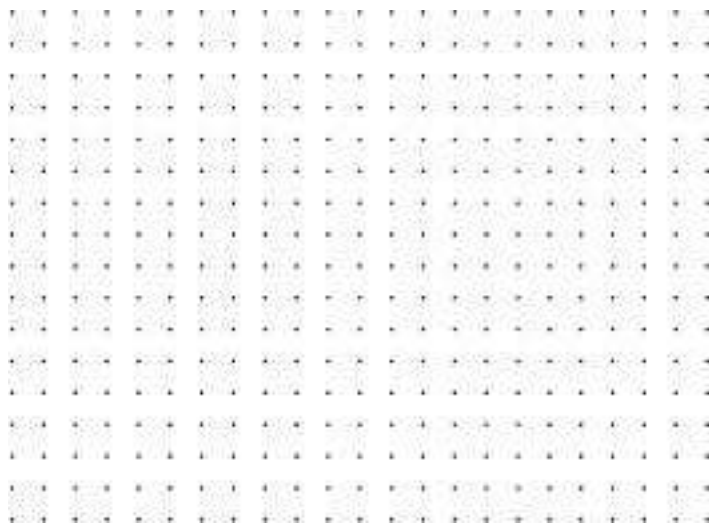
Mr. Wong created a rectangular prism with the dimensions of 2 cubes by 3 cubes by 4 cubes.

What is the volume of the prism? Show your work!

Draw a picture of the rectangular prism below.



Draw a net that would cover this rectangular prism.



Calculate the surface area of the rectangular prism using the net above.