



Multiplication Using the 3-D Blocks

The volume of a box can be found by multiplying the area of the base by the height. The base need not be horizontal. For each of the boxes described below:

- Build the box with the Lab Gear.
- Make a 3-D sketch of the box.
- Write the volume of the box.

1. area of base = y^2

height = $3x$

volume = _____

2. area of base = $2xy$

height = $x + 1$

volume = _____

3. area of base = $3x + x^2$

height = $3 + y$

volume = _____

4. area of base = $xy + y^2$

height = $y + x + 1$

volume = _____

Use the Lab Gear to build boxes with the dimensions given below. Then write an equation in the form $length \cdot width \cdot height = volume$.

	Length	Width	Height	Volume
5.	$y + 1$	$y + 1$	y	
6.	$y + x + 2$	$x + y$	x	
7.	$x + 3$	$x + 2$	$x + 1$	