VOLUME

What is volume?

Volume measures the amount a solid figure can hold.

Volume is measured in terms of units^3 and can be measured in inches, feet, meters, centimeters, and millimeters.

The formula for the **volume of a rectangular prism is V = l · w · h**, where l is the length, w is the width, and h is the height.

The formula for the **volume of a cube is V = s^3**, where **s** is a side of the square.

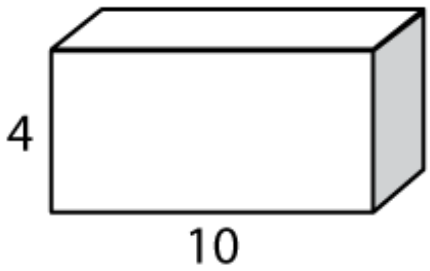
How to use volume:

The formu

V =

- Fill ir the result is th
- If given the volume and 2 sides of the rectangular prism, fill in the volume and the sides given and perform the operations to find the missing side.

  Example:



$V = 120 \text{ units}^3$

$$V = l \cdot w \cdot h$$
$$120 = 10 \cdot w \cdot 4$$
$$120 = 40 \cdot w$$
$$3 = w$$

The formula to find the volume of a cube is: **V = s^3.**

- This can be used to find the volume given a side or to find a side given the volume.

- Since volume is **l · w · h**, the dimensions of a rectangular prism would be given in the same form. If a rectangular prism has length of 15, a width of 12 and a height of 14, the dimensions would be 15 x 12 x 14. The dimensions would then be multiplied to get the volume.

- Sometimes, rectangular prisms are packaged together. If the volume of one rectangular prism is known, it would be multiplied by the number of rectangular prisms packaged together to get the total volume.

Example:

The boxes wrap

80 ·

Try this!

1. Find the volume:

l = 3, w = 5, h = 11

l = 6, w = 7, h = 2

2. Find the missing dimension:

v = 288 units³, l = 9, w = 8

3. Find the volume of a cube:

s = 10

s = 5

s = 2

4. Find the side of a cube:

volume = 64 units³

volume = 125 units³