# VOLUME

## A DEFINITION

#### Definition Volume

The **volume** of a shape is the amount of space it takes up in three dimensions. We measure it in cubic units, like cubic centimeters or cubic meters.

To find the volume, imagine filling the shape with small cubes, like building blocks. Count how many cubes fit inside the shape.

**Ex:** Find the volume:



Answer:



Volume = 8 cube units

### **B** UNITS OF VOLUME

### Definition Units of Volume

• Cubic Centimeter (cm<sup>3</sup>): A small unit of volume, about the size of a small ice cube.

 $1~{\rm cm}^3 = 1~{\rm cm} \times 1~{\rm cm} \times 1~{\rm cm}$ 

 $\begin{array}{c} 1 \text{ cm} \overbrace{\phantom{0}}^{\frown} 1 \text{ cm} \\ 1 \text{ cm} \end{array}$ 

• Cubic Meter (m<sup>3</sup>): A larger unit of volume, about the space it takes for a washing machine.



# C VOLUME OF A RECTANGULAR CUBOID

#### Proposition Volume of a Rectangular Cuboid

The volume of a rectangular prism is multiplying its length, width, and height:

 $Volume = length \times width \times height$ 



### **Ex:** Find the volume:



#### Answer:

Volume = length × width × height =  $3 \times 2 \times 4$ =  $24 \text{ cm}^3$ 

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