Mathematics · Grade 6

# Volume of a rectangular prism

Count cubes in each layer, then multiply by the number of layers.

Name _____ Date _____

## Worked example

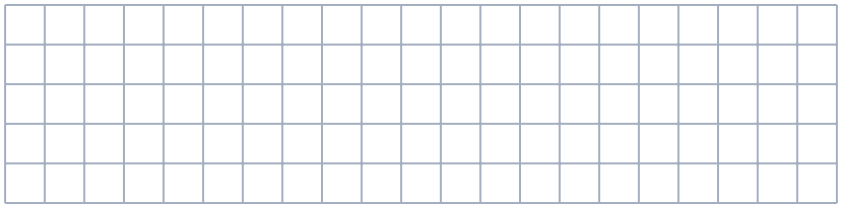
A 4 cm × 3 cm × 2 cm box holds 12 unit cubes per layer and has 2 layers. Its volume is 24 cm³.

## Your turn

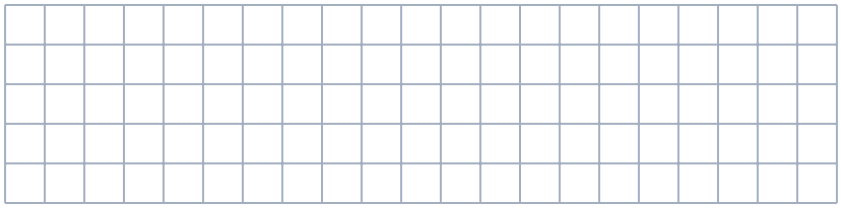
1. One layer has 5 rows of 4 cubes. How many cubes are in the layer?

2. There are 3 layers of 14 cubes. How many altogether?

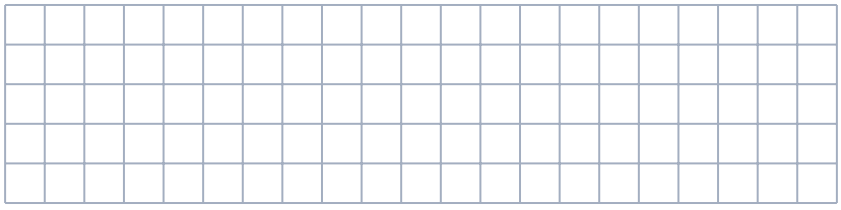
3. Find the volume of the 3 cm × 3 cm × 4 cm prism.



4. Find the volume of the 6 cm × 4 cm × 2 cm prism.



5. Find the volume of the 5 cm × 4 cm × 3 cm prism.



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## Worked example

A 4 cm × 3 cm × 2 cm box holds 12 unit cubes per layer and has 2 layers. Its volume is 24 cm³.

## Your turn

**6.** Find the volume of the 8 cm × 2 cm × 5 cm prism.

**7.** A box has a volume of 72 cm³. Its base is 6 cm × 4 cm. Find its height.

**8.** Find the volume of each box. The first measures 4 cm × 4 cm × 2 cm. The second measures 8 cm × 2 cm × 2 cm. Do the boxes have the same volume?