



**THIRD SPACE
LEARNING**

Volume of a Cube Worksheet

Geometry

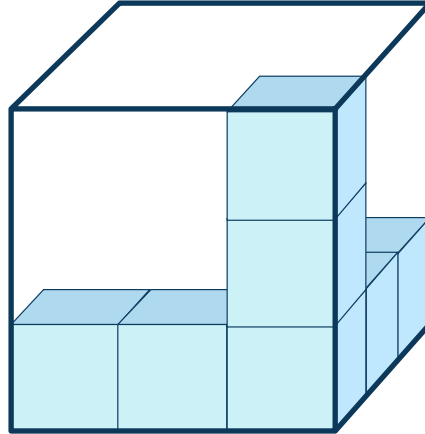
Grades 4 to 5

Skill Questions

Name:

Date:

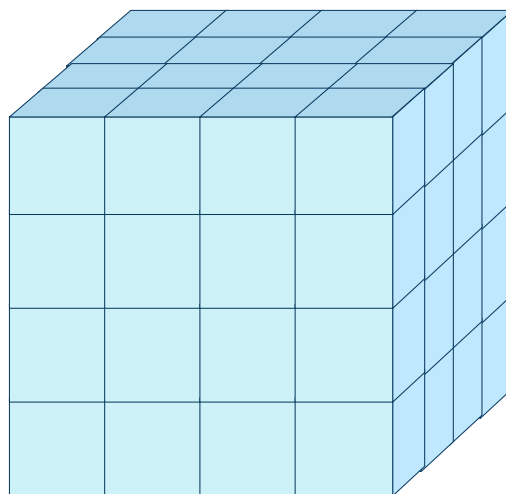
- 1 Philipe is filling a box with cubes.



What is the maximum number of cubes that will fit inside the box?

Answer

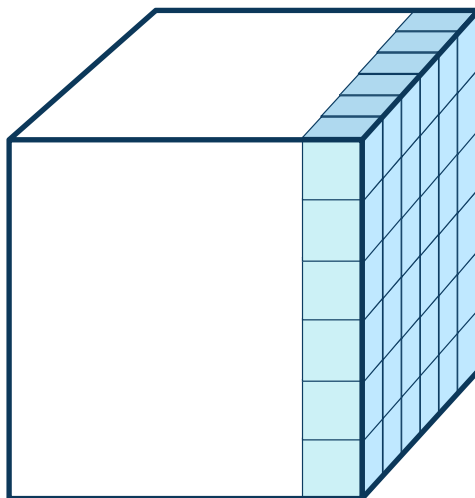
- 2 Find the volume of the cube.



Answer

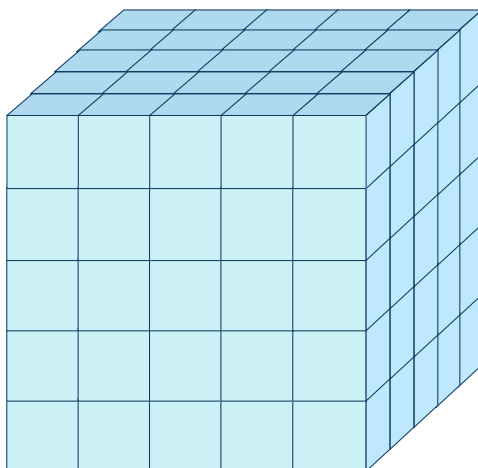
Volume of a Cube Worksheet | Grades 4 to 5

- 3 The volume of a cube is 216 cubic units. The side of the cube is shown. How many cubes long is the prism?



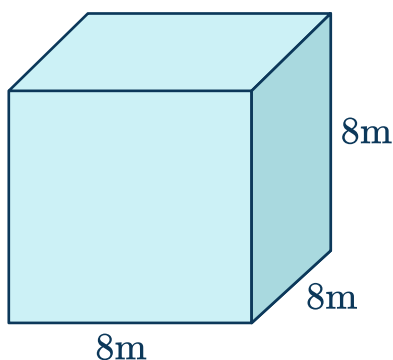
Answer

- 4 Write the equation that calculates the volume of the cube.



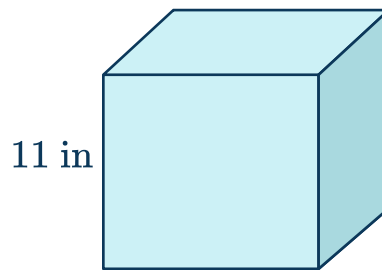
Answer

- 5 Find the volume of the cube.



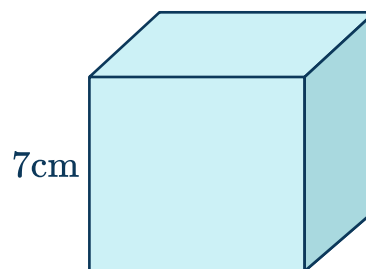
Answer

- 6 Find the volume of the cube.



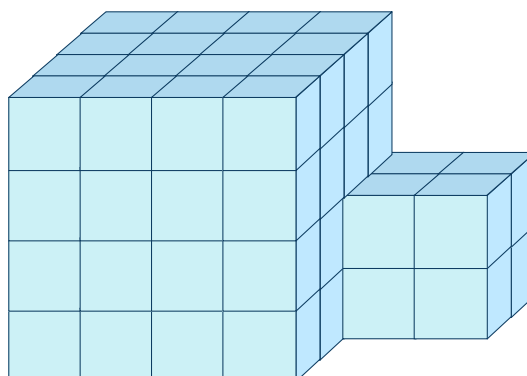
Answer

- 7 The area of the base of the cube is 49 cm^2 . Find the volume.



Answer

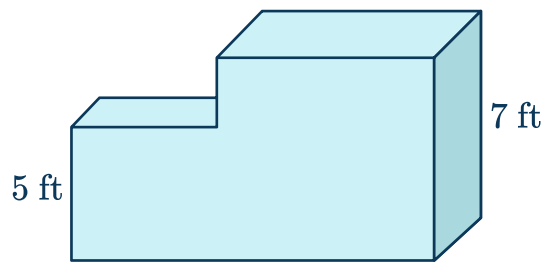
- 8 Find the volume of the solid figure.



Answer

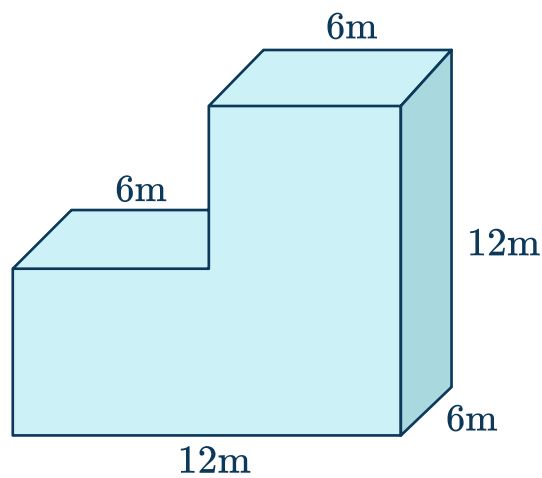
Volume of a Cube Worksheet | Grades 4 to 5

- 9 Find the volume of the solid figure composed of two cubes.



Answer

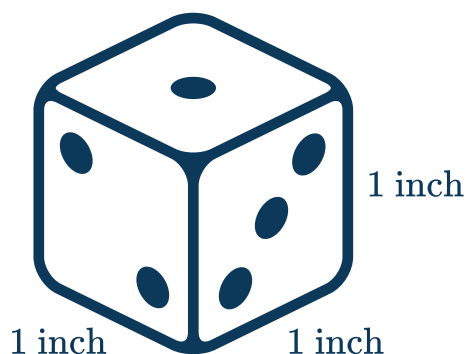
- 10 Find the volume of the solid figure.



Answer

Applied Questions

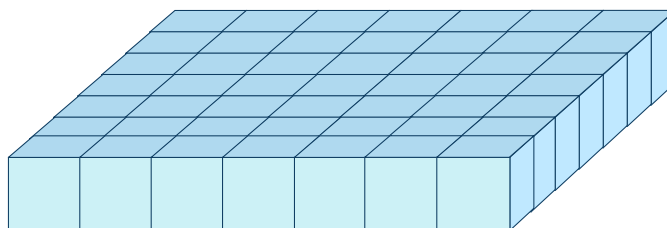
11



Mr. Wilson has 24 dice in a small rectangular box. The dice are side by side, with no gaps. They fit in the box exactly. What is the volume of the small rectangular box?

Answer

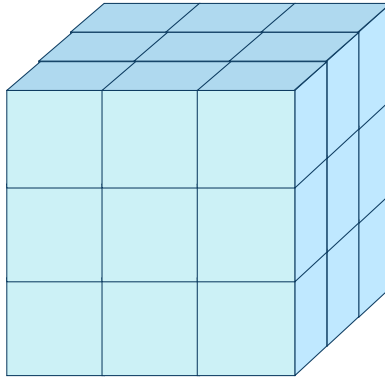
12 Trinity makes a cube with square blocks. She builds the first layer.



Trinity then adds 6 more layers. What is the volume of the cube that Trinity builds?

Answer

- 13 Wendy and Yuri make a cube out of blocks.



- Wendy says “We can multiply $3 \times 3 \times 3$ ” to find the total number of blocks.”
- Yuri says “No, all we need to do is triple 9.”

Who is correct? Explain.

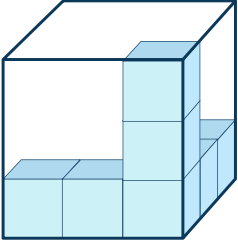
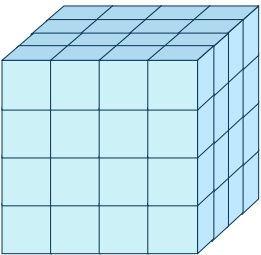
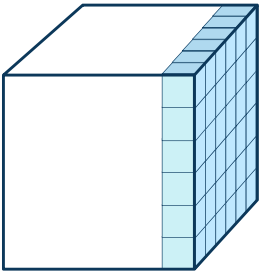
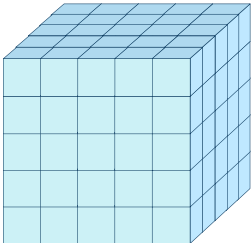
- 14 David fills a cubic container with water. He knows the area of the base is 81 inches² and the container can hold 729 inches³ of water. What is the height of the container?

Answer

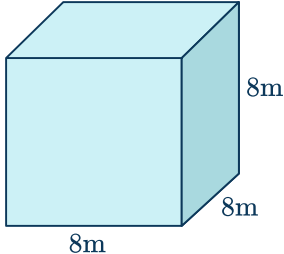
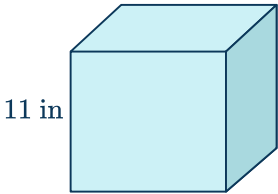
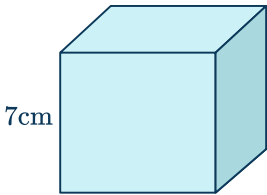
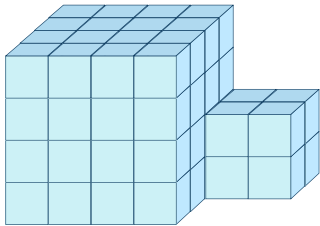
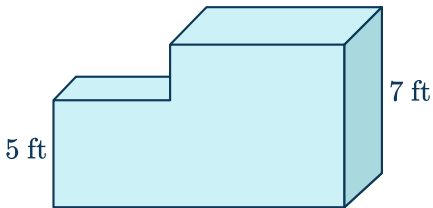
- 15 Teo has a box that measures 10 inches by 10 inches by 10 inches. He places a cube inside the box that has a base area of 16 inches². How much more space, in cubic inches, is left inside the box?

Answer

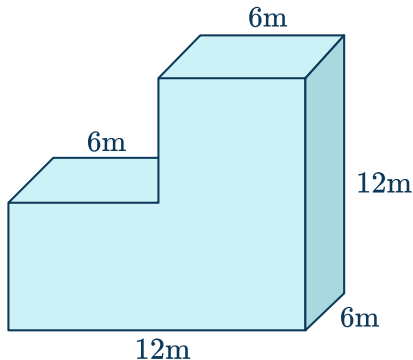
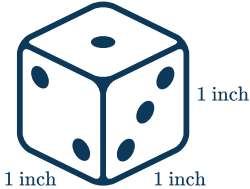
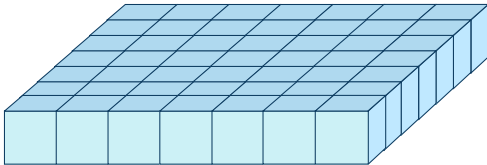
Answers

Question number	Question	Answers	Standard
1	<p>Philippe is filling a box with cubes.</p>  <p>What is the maximum number of cubes that will fit inside the box?</p>	27	5.MD.C.3b
2	<p>Find the volume of the cube.</p> 	64 cubic units	5.MD.C.4
3	<p>The volume of a cube is 216 cubic units. The side of the cube is shown. How many cubes long is the prism?</p> 	6	5.MD.C.4
4	<p>Write the equation that calculates the volume of the cube.</p> 	$5 \times 5 \times 5$	5.MD.C.5a

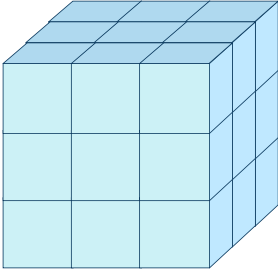
Volume of a Cube Worksheet | Grades 4 to 5 | Answers

Question number	Question	Answers	Standard
5	Find the volume of the cube. 	512 m ³	5.MD.C.5b
6	Find the volume of the cube. 	1,331 inches ³	5.MD.C.5b
7	 The area of the base of the cube is 49 cm ² . Find the volume.	343 cm ³	5.MD.C.5b
8	Find the volume of the solid figure. 	72 cubes	5.MD.C.5c
9	Find the volume of the solid figure composed of two cubes. 	468 ft ³	5.MD.C.5c

Volume of a Cube Worksheet | Grades 4 to 5 | Answers

Question number	Question	Answers	Standard
10	<p>Find the volume of the solid figure.</p> 	648 m ³	5.MD.C.5c
11	 <p>Mr. Wilson has 24 dice in a small rectangular box. The dice are side by side, with no gaps. They fit in the box exactly. What is the volume of the small rectangular box?</p>	24 cubed inches	5.MD.C.3b
12	<p>Trinity makes a cube with square blocks. She builds the first layer.</p>  <p>Trinity then adds 6 more layers. What is the volume of the cube that Trinity builds?</p>	343 cubes	5.MD.C.4

Volume of a Cube Worksheet | Grades 4 to 5 | Answers




Question number	Question	Answers	Standard
13	<p>Wendy and Yuri make a cube out of blocks.</p>  <ul style="list-style-type: none"> Wendy says “We can multiply $3 \times 3 \times 3$” to find the total number of blocks.” Yuri says “No, all we need to do is triple 9.” <p>Who is correct? Explain.</p>	<p>Answers will vary. Example answer: They are both correct. Yuri found the area of one layer and knows there are 3 layers, so that’s 9×3. Wendy measured each side and knows to multiply the length, width and height. NOTE: A response that only addresses $3 \times 3 \times 3 = 9 \times 3$ with no mention of where these values came from or how they relate to volume is considered incorrect.</p>	5.MD.C.5b
14	<p>David fills a cubic container with water. He knows the area of the base is 81 inches² and the container can hold 729 inches³ of water. What is the height of the container?</p>	9 inches	5.MD.C.5b
15	<p>Teo has a box that measures 10 inches by 10 inches by 10 inches. He places a cube inside the box that has a base area of 16 inches². How much more space, in cubic inches, is left inside the box?</p>	936	5.MD.C.5b

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