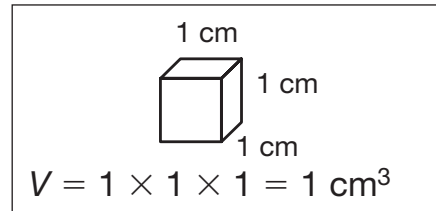
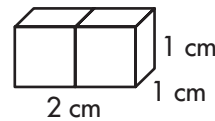


# Problem Solving: Use Objects and Reasoning

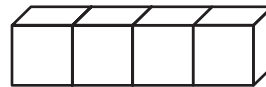
This cube has a volume of  $1 \text{ cm}^3$ .



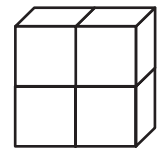
$V = 2(1 \times 1 \times 1) = 2 \text{ cm}^3$



The same number of cubes will always have the same volume.



$V = 4 \text{ cm}^3$

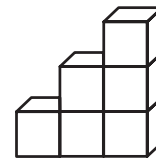


$V = 4 \text{ cm}^3$

Each cube has a volume of  $1 \text{ cm}^3$ .

1. Find the volume of the figure.

\_\_\_\_\_



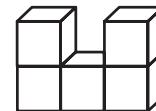
2. Make and draw a figure of cubes that has a volume of  $7 \text{ cm}^3$ .

3. Explain how you knew how many cubes to use to draw the figure in Exercise 2.

\_\_\_\_\_

4. Find the volume.

\_\_\_\_\_



5. If the cubes in Exercise 4 were increased to 3 cm on a side, how would the volume be affected?

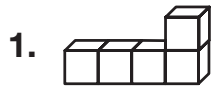
\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

# Problem Solving: Use Objects and Reasoning

Find the volume of each figure of centimeter cubes.



7. Make and draw a figure of cubes that has a volume of  $6 \text{ cm}^3$ .

8. Without building a model, tell whether a long row of 8 cubes or a cube made from 8 cubes would have a greater volume. Explain.

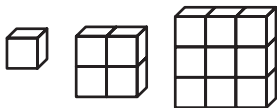
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9. Make and draw a figure that has the same volume as the diagram.



10. Find the volume of these figures. Then describe the pattern(s) you see. Can you determine the volume of the next figure in the pattern? Explain.



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