

*Key*



# VOLUME QUIZ REVIEW

The quiz is scheduled for \_\_\_\_\_. Use this review to help you prepare for this assessment. In addition to this review, please remember to practice problems using your class notes and homework.

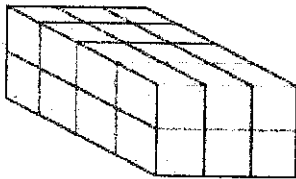
VOCABULARY: unit cube, cube, rectangular prism, volume

**DIRECTIONS:** ANSWER THE FOLLOWING QUESTIONS REFERRING TO YOUR CLASS NOTES AND HOMEWORK SHEETS. PLEASE FILL IN THE THINK BOXES FIRST IN ORDER TO ASSIST YOU IN ANSWERING THE QUESTIONS. BE SURE TO LABEL ANSWERS WITH PROPER UNITS FOR FULL CREDIT.

## PART I: UNIT CUBES

HOW MANY UNIT CUBES ARE IN THE FIGURES BELOW?

1.



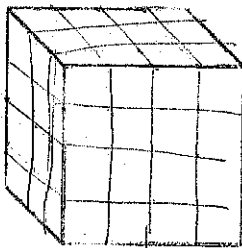
*24 cubes*

### THINK BOX

What is a unit cube?

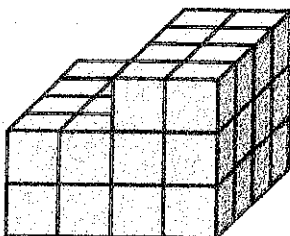
*A cube that is 1 unit on the length, width, and height.*

2.



*48 cubes*

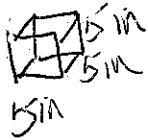
3.



*40 cubes*

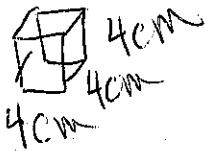
**PART II: VOLUME OF CUBES** FIND THE VOLUME OF THE FOLLOWING CUBES.

4. What is the volume of a cube with an edge length of 5 inches?  
 a. Draw a picture and label the dimensions then show all thinking.



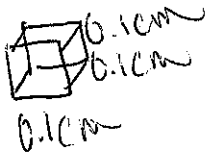
VOLUME 125 in<sup>3</sup>  
 (units)

5. What is the volume of a cube with an edge length of 4 cm?  
 a. Draw a picture and label the dimensions then show all thinking.



VOLUME 64 cm<sup>3</sup>  
 (units)

6. What is the volume of a cube with an edge length of 0.1 cm?  
 a. Draw a picture and label the dimensions then show all thinking.



VOLUME 0.001 cm<sup>3</sup>  
 (units)

**THINK BOX**

What is meant by an edge length of 5 inches?  
 A cube that has a length, width, height of 5 in.

What formula do you use to find the volume of a cube?  
 $V = l \times w \times h$

What units is volume measured in?  
 cubic units or unit<sup>3</sup>

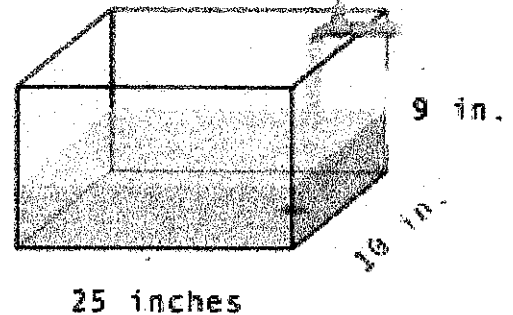
What is meant by dimensions?  
 the length, width, and height

**PART III: VOLUME OF RECTANGULAR PRISMS**

FIND THE VOLUME OF THE FOLLOWING RECTANGULAR PRISMS.

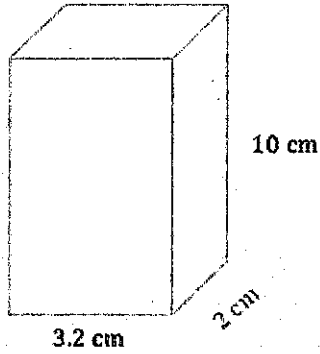
7. How much water can the sink hold? Express your answer in cubic inches.

The sink can hold 2,250 in<sup>3</sup> of water.



CC.6.G.2

8.



What is the formula for volume?

$$V = l \times w \times h$$

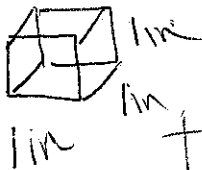
VOLUME 64 cm<sup>3</sup>  
(units)

9. The standard size of a construction brick is 2.25 inches wide by 8 inches long by 3 inches high. What is the volume of the brick? Show or explain your work.
- a. Draw a picture of the brick and label the three dimensions. Then show all thinking.

VOLUME 54 in<sup>3</sup>  
(units)

#### PART IV: VOLUME OF RECTANGULAR PRISMS FILLED WITH CUBES

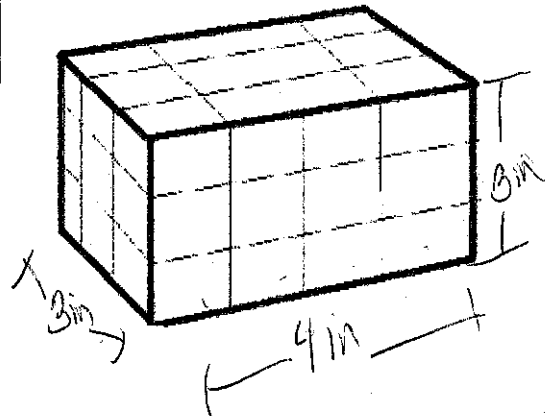
10. Find the volume of the rectangular prism below that is made of small cubes with an edge length of 1 inch.



What units are used to measure volume?

Cubic units

$$V = 36 \text{ in}^3$$



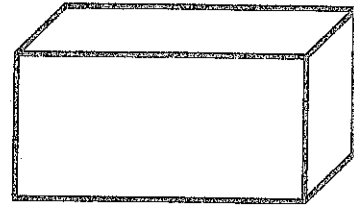


CC.6.G.2

13. How many cubes with an edge length of 5 inches can fit along the length of the prism below?



5 in.



30 in.

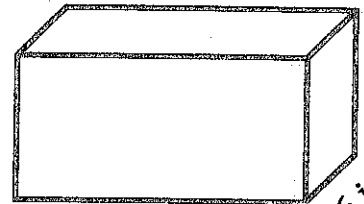
SENTENCE 6 cubes can fit along the length.

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14. How many cubes with an edge length of 3 inches can fit inside the entire prism?



3 in.



9 in.

6 in.

30 in.

SENTENCE 60 cubes can fit inside the entire prism.