



# 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.

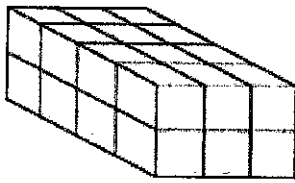
VOCABULARY: unit cube, cube, volume

DIRECTIONS: ANSWER THE FOLLOWING QUESTIONS REFERRING TO YOUR CLASS NOTES AND HOMEWORK SHEETS. PLEASE FILL IN THE HINT 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

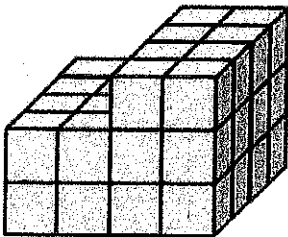
HOW MANY UNIT CUBES ARE IN THE FIGURES BELOW?

1.



24 cubes

2.



40 cubes

**THINK BOX**

What is a unit cube?  
 A cube in which the length, width and height all equal 1 unit.

## PART II: CALCULATING VOLUME

FIND THE VOLUME OF THE FOLLOWING CUBES.

3. A 5 inch cube.

125 in<sup>3</sup>



4. A cube with an edge length of 1.1 cm.

1.331 cm<sup>3</sup>



**THINK BOX**

Draw each of the cubes in the space provided next to each problem.

✓

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

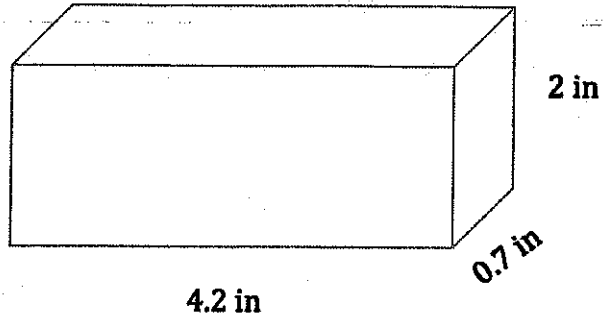
What units is volume measured in?  
 cubic units

CC.6.G.2

FIND THE VOLUME OF THE FOLLOWING RECTANGULAR PRISMS.

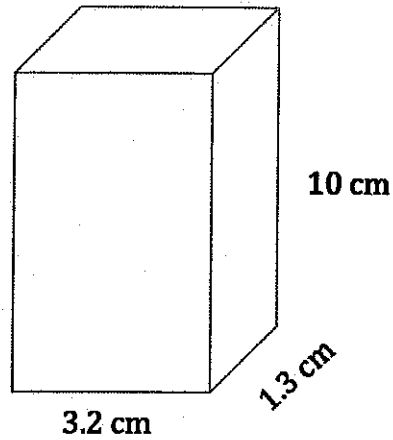
5. SEE PRISM BELOW.

The volume is 5.88 in<sup>3</sup>.



6. SEE PRISM BELOW.

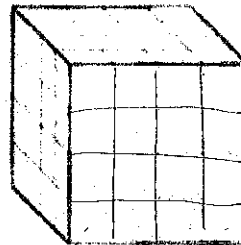
The volume is 41.6 cm<sup>3</sup>.



### PART III: USING CUBES TO FIND VOLUME

7. 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



Sentence: The volume is 64 in<sup>3</sup>.

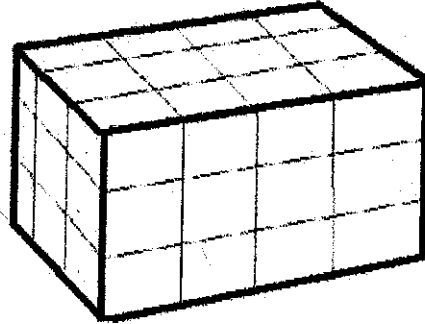
### THINK BOX

What are the two strategies you could use to find the volume of the rectangular prism? (Refer to your class notes.)

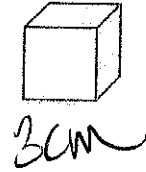
- 1.) Find the volume of one cube and multiply by the number of cubes in the prism.
- 2.) Use the cube to find the dimensions of the prism.

CC.6.G.2

8. Find the volume of the rectangular prism below that is made of small cubes with an edge length of 3 cm.

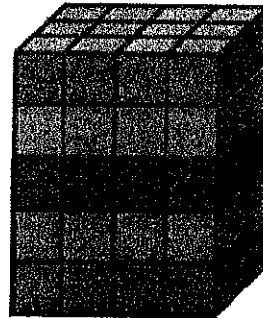
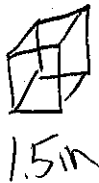


Label the cube below.



Sentence: The volume is  $27\text{cm}^3$ .

9. Find the volume of the rectangular prism below that is made of small cubes with an edge length of 1.5 in.



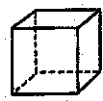
Hint: Draw a cube with an edge of 1.5 in. below.

Sentence: The volume is  $202.5\text{in}^3$ .

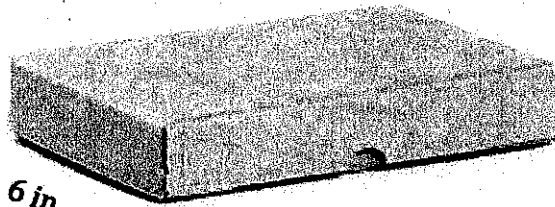
CC.6.G.2

**PART III: HOW MANY CUBES ARE IN?**

10. Small cubes with an edge length of 3 inches are packed inside the box shown. How many cubes are needed to completely fill the rectangular prism?



3 in.



6 in.

12 in.

3 in.

**THINK BOX**

What operations do you use to solve this problem?

$\div$  and  $\times$

What are the correct units in your answer?

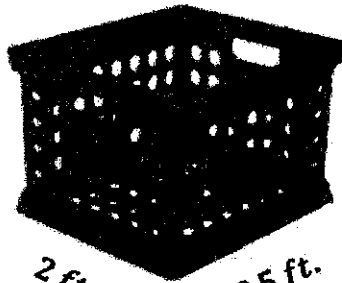
cubes

Sentence: 8 - 3in cubes can fit inside the box.

11. Small cubes with an edge length of 0.5 ft. are packed inside the crate. How many cubes fit inside the crate when it is completely full?



0.5 ft



1 ft.

2 ft.

2.5 ft.

**THINK BOX**

Draw a picture of the small cube with an edge of 0.5 ft

see to left of crate

What operations do you use to solve this problem?

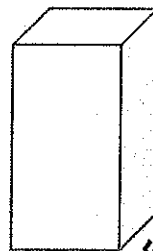
$\div$  and  $\times$

Sentence: 40 - 0.5ft cubes fit inside the crate.

12. Small cubes with an edge length of 0.25 m are packed inside the box shown below. How many cubes fit inside the box when it is completely full?



0.25 m



1 m

0.5 m 0.25 m

**THINK BOX**

Draw a picture of the small cube with an edge of 0.25 m.

Sentence: 8 - 0.25m cubes can fit inside the prism.