

## MATHEMATICS 5 FOURTH QUARTER

### MODULE 2: VOLUME OF A CUBE AND A RECTANGULAR PRISM



#### What's New

**Volume** is the amount of space occupied by an object. You will understand this concept as you go along with this module.

In finding the volume of a cube and rectangular prism, you have to consider its dimensions: length, width and height. Always remember that volume is the amount of space a solid figure occupies.

A **cube** is a solid figure whose length, width and height are equal while a **rectangular prism** whose length, width and height may or may not be equal. Volume is expressed in cubic units. We write the cubic units:  $\text{unit}^3$ .

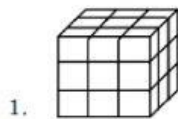
Formula for getting the volume of a **cube**:

$$V = s^3 \text{ or } s \times s \times s$$

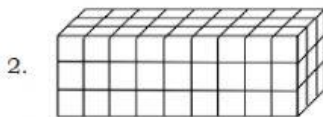
Formula for getting the volume of a **rectangular prism**:

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

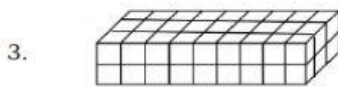
**Directions:** Look at the figures carefully. Count the cubic units to find the volume of each figure.



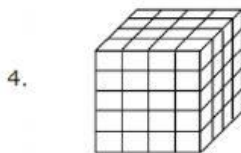
V = \_\_\_\_\_



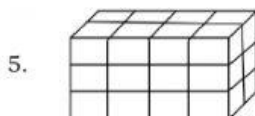
V = \_\_\_\_\_



V = \_\_\_\_\_



V = \_\_\_\_\_



V = \_\_\_\_\_

Directions: Match each given volume with its corresponding dimensions found in the KEY by writing the letter on the box assigned to it.

|                           |                          |                           |                          |                           |                         |
|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|-------------------------|
| <b>512 cm<sup>3</sup></b> | <b>240 m<sup>3</sup></b> | <b>216 cm<sup>3</sup></b> | <b>30 mm<sup>3</sup></b> | <b>525 cm<sup>3</sup></b> | <b>8 cm<sup>3</sup></b> |
|                           |                          |                           |                          |                           |                         |

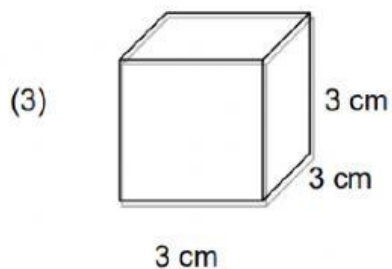
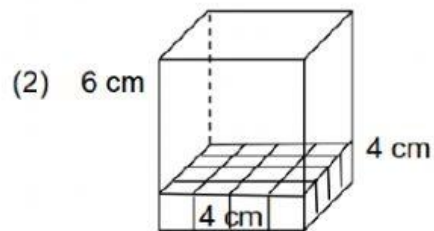
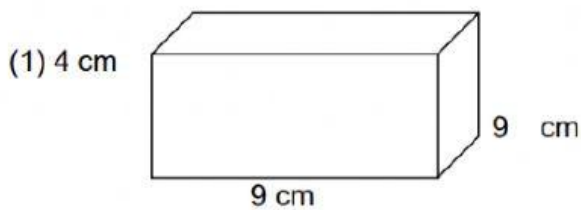
KEY:

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| <b>M = L - 15 cm, W - 7 cm, H - 5 cm</b> | <b>C = S is 3 cm</b>                    |
| <b>A = 8 mm by 2 mm by 2 mm</b>          | <b>O = L - 10 m, W - 6 m, H - 4 m</b>   |
| <b>L = 6 cm x 6 cm x 6 cm</b>            | <b>V = length of each side is 8 cm</b>  |
| <b>B = L - 5 cm, W - 2 cm, H - 4 cm</b>  | <b>U = 2 mm by 5 mm by 3 mm</b>         |
| <b>E = S is 2 cm</b>                     | <b>R = L - 8 cm, W - 3 cm, H - 1 cm</b> |



### Assessment

**DIRECTIONS:** Look at the figures very carefully. Find the volume of each.



(4) Length = 10 units,  
width = 6 units,  
height = 4 units  
V = \_\_\_\_\_

(5)  $9 \times 9 \times 9$   
V = \_\_\_\_\_