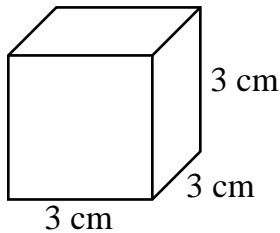


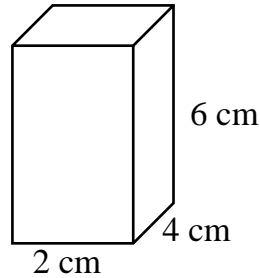
5.MD.C.5 Volume of Rectangular Prisms

5.MD.C.5 Relate volume to the operations of multiplication and addition

1. Find the volume of each of the following prisms.



Solution:

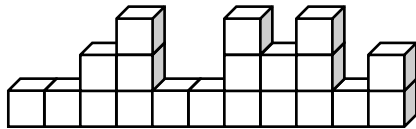


Solution:

2. What is the difference between in, in², and in³?

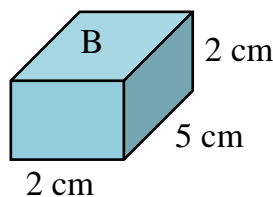
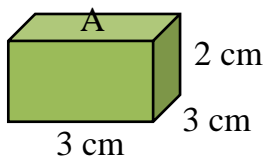
Solution:

3. Find the total volume of the structure shown below if the side length of each small cube is 2 cm.



Solution:

4. Compare the volumes of prism A and prism B.



Solution:

5. True or False.

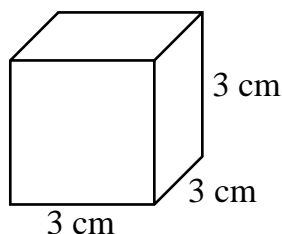
- _____ a. The volume of a cube with side length 5 cm is greater than the volume of a cube with side length 5 inches.
- _____ b. A rectangular prism having dimensions of 2 in \times 4 in \times 8 in is equal to a cube with side length 4 in.
- _____ c. cm³ is a unit of volume while cm² is a unit of area.
- _____ d. The volume of a cube with side length 3 cm is greater than the volume of a rectangular prism with dimensions of 2 cm \times 4 cm \times 5 cm.

5.MD.C.5 Volume of Rectangular Prisms

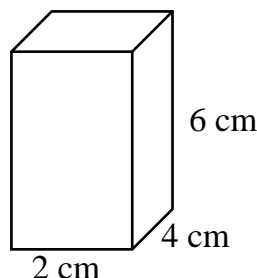
Answer Key

5.MD.C.5 Relate volume to the operations of multiplication and addition

1. Find the volume of each of the following prisms.



Solution:
 27 cm^3



Solution:
 48 cm^3

2. What is the difference between in, in^2 , and in^3 ?

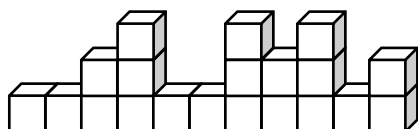
Solution:

in is the unit used to measure length

in^2 is the unit used to measure area

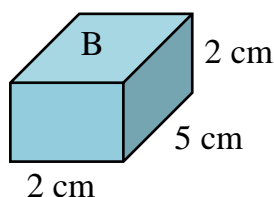
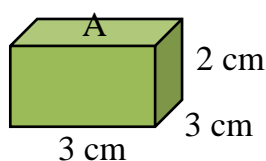
in^3 is the unit used to measure volume

3. Find the total volume of the structure shown below if the side length of each small cube is 2 cm.



Solution:
 160 cm^3

4. Compare the volumes of prism A and prism B.



Solution:

The volume of prism A is 18 cm^3 while the volume of prism B is 20 cm^3 . Hence, the volume of prism B is greater than prism A.

5. True or False.

- False a. The volume of a cube with side length 5 cm is greater than the volume of a cube with side length 5 inches.
- True b. A rectangular prism having dimensions of $2 \text{ in} \times 4 \text{ in} \times 8 \text{ in}$ is equal to a cube with side length 4 in.
- True c. cm^3 is a unit of volume while cm^2 is a unit of area.
- False d. The volume of a cube with side length 3 cm is greater than the volume of a rectangular prism with dimensions of $2 \text{ cm} \times 4 \text{ cm} \times 5 \text{ cm}$.