

Finding Missing Dimensions - Volume Applications

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5th Grade Math Practice

Name: _____

Date: _____

Solve each problem. Show your work when needed.

1. The volume of a rectangular prism is 240 cm^3 , and the base area is 60 cm^2 . What is the height?
2. A box has a volume of 1500 m^3 . If the length is 30 m and the width is 20 m, what is the height?

3. Find the volume of a cube with a side length of 3 cm.
4. Circle the greater volume: 100 cm^3 or 120 cm^3
5. What number comes next? Volume = length \times width \times height, if length = 5, width = 3, height = ____, Volume = 60.
6. The volume of a cylinder is found by using the formula $V = \pi r^2 h$. True or False?
 True False
7. A fish tank has a length of 50 cm, a width of 25 cm, and a height of 40 cm. What is its volume?

8. If a rectangular prism has a volume of 500 cm^3 , a length of 10 cm, and a width of 5 cm, what is the height?
9. A cylindrical container has a radius of 7 cm and a height of 10 cm. What is the volume? (Use $\pi \approx 3.14$)

10. The volume of a rectangular prism is 504 cm^3 . If the length is 12 cm and the height is 7 cm, what is the width?
11. A pool has a volume of 12000 liters. If the depth is 2 meters and the length is 5 meters, what is the width?

12. What is the missing dimension if the volume of a rectangular prism is 360 cm^3 and the base area is 30 cm^2 ? Height = ____
13. A box has a volume of 250 cm^3 and dimensions 5 cm \times 5 cm. What is the height?
14. A triangular prism has a base area of 15 cm^2 and a height of 10 cm. What is the volume?

15. Which has a greater volume: A box of dimensions 2m x 3m x 4m or 3m x 3m x 3m?

Answer Key

1. 4 2. 2.5 3. 27 4. 120 5. 4 6. True 7. 50000 8. 10 9. 1539.8 10. 6 11. 1200 12. 12 13. 10 14. 150 15. 3m x 3m x 3m