

Understanding Volume

BibleMouse.com

5th Grade Math Practice

Name: _____

Date: _____

Solve each problem. Show your work when needed.

1. What is the volume of a cube with side length 3 cm? (Volume = side³)

2. Calculate the volume of a rectangular prism with length 4 cm, width 3 cm, and height 2 cm. (Volume = length × width × height)

3. A fish tank measures 5 feet long, 2 feet wide, and 3 feet high. What is its volume in cubic feet?

4. Circle the shape with greater volume: a cube with side 2 cm or a cube with side 3 cm.

5. If a box has a volume of 48 cubic inches and a height of 4 inches, what is the area of the base? (Area = Volume ÷ Height)

6. Volume is the same as area.

True False

7. If a cylindrical jar has a radius of 3 cm and a height of 10 cm, what is its volume? (Use $V = \pi r^2 h$)

8. Find the volume of a cone with a radius of 2 cm and a height of 6 cm. (Volume = $\frac{1}{3} \times \pi \times r^2 \times h$)

9. A box can hold 60 cubic centimeters. If it is filled with blocks that each have a volume of 5 cubic centimeters, how many blocks fit in the box?

10. Which has a greater volume: a cube with a side length of 4 cm or a sphere with a diameter of 4 cm? (Use $V = \frac{4}{3} \times \pi \times r^3$ for the sphere)

11. What is the volume of a rectangular prism that has a length of 5 cm, width of 4 cm, and height of ___ cm if the volume is 80 cubic cm?

12. The volume of a shape can be measured in square units.

True False

13. If you have a cube with a volume of 64 cubic inches, what is the length of one side?

14. What is the volume of a rectangular prism with dimensions 10 cm, 5 cm, and 2 cm?

15. If a bottle holds 1.5 liters of water, how many milliliters is that? (1 liter = 1000 milliliters)

Answer Key

1. 27 2. 24 3. 30 4. Cube with side 3 cm 5. 12 6. False 7. 94.2 8. 13.33 9. 12 10. Cube with side length 4 cm 11. 4 12. False 13. 4 14. 100 15. 1500