

Volume Formulas

Six shapes, one page. Volume is measured in cubic units (cm³, m³, in³).

Shape	Formula	Example	Volume
Cube	$V = s^3$	$s = 4$	64
Rectangular prism	$V = l \times w \times h$	$4 \times 3 \times 5$	60
Cylinder	$V = \pi r^2 h$	$r = 3, h = 10$	≈ 282.74
Cone	$V = \frac{1}{3} \pi r^2 h$	$r = 3, h = 10$	≈ 94.25
Sphere	$V = \frac{4}{3} \pi r^3$	$r = 3$	≈ 113.10
Square pyramid	$V = \frac{1}{3} s^2 h$	$s = 4, h = 6$	32

Remember

Use the radius, not the diameter: halve the diameter first. Keep all measurements in the same unit. 1 liter = 1,000 cm³, and 1 m³ = 1,000 liters.

Practice (answers at the end)

1) A box 6 cm × 4 cm × 2 cm. 2) A can with radius 4 cm and height 10 cm. 3) A ball with radius 5 cm. 4) A cone with radius 2 cm and height 9 cm.

Answers: 1) 48 cm³ 2) ≈ 502.65 cm³ 3) ≈ 523.60 cm³ 4) ≈ 37.70 cm³