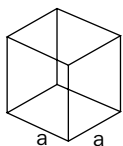
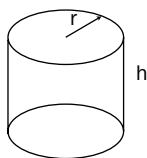


## Volume of Three-Dimensional Objects



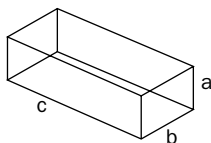
**Cube**

**Volume** =  $a^3$



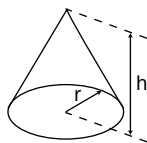
**Cylinder**

**Volume** =  $\pi r^2 h$



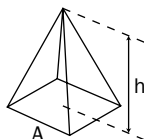
**Rectangular prism**

**Volume** =  $abc$



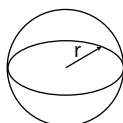
**Cone**

**Volume** =  $\frac{\pi r^2 h}{3}$



**Pyramid**

**Volume** =  $\frac{A h}{3}$



**Sphere**

**Volume** =  $\frac{4\pi r^2 h}{3}$

## Useful Rules

To Find Circumference

- Multiply diameter by 3.1416
- Or divide diameter by 0.3183

To Find Diameter

- Multiply circumference by 0.3183
- Or divide circumference by 3.1416

To Find Radius

- Multiply circumference by 0.15915
- Or divide circumference by 6.28318

To Find Area of a Circle

- Multiply circumference by one-quarter of the diameter.
- Or multiply the square of the diameter by 0.7854
- Or multiply the square of the circumference by 0.07958
- Or multiply the square of one half of the diameter by 3.1416

To Find the Surface of a Sphere or Globe

- Multiply the diameter by the circumference
- Or multiply the square of the diameter by 3.1414
- Or multiply four times the square of radius by 3.1416

To Find Side of an Inscribed Square

- Multiply diameter by 0.7071
- Or multiply circumference by 0.2251
- Or divide circumference by 4.4428

To Find Side of an Equal Square

- Multiply diameter by 0.8862
- Or divide diameter by 1.1284
- Or multiply circumference by 0.2821
- Or divide circumference by 3.545

Square

- A side multiplied by 1.4142 equals the diameter of its circumscribing circle.
- A side multiplied by 4.443 equals the circumference of its circumscribing circle.
- A side multiplied by 1.128 equals the diameter of an equal circle.
- A side multiplied by 3.547 equals the circumference of an equal circle.

To Find the Cubic Inches (Volume) in a Globe or Sphere

- Multiply the cube of the diameter by 0.5236