

Mathematics Reference Sheet

Volume

Cylinder: $V = \pi r^2 h$

Pyramid: $V = \frac{1}{3} B h$

Cone: $V = \frac{1}{3} \pi r^2 h$

Sphere: $V = \frac{4}{3} \pi r^3$

V = volume
 r = radius
 h = height
 B = area of base

Coordinate Geometry

Slope: $m = \frac{y_2 - y_1}{x_2 - x_1}, x_2 \neq x_1$

Special Factoring

$$a^2 - b^2 = (a - b)(a + b)$$

$$a^2 + 2ab + b^2 = (a + b)^2$$

$$a^2 - 2ab + b^2 = (a - b)^2$$

Quadratic Formula

For $ax^2 + bx + c = 0$,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Interest

Simple interest Formula:

$$I = prt$$

p = principal

r = annual interest rate

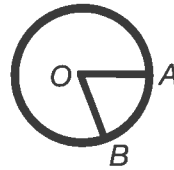
t = time in years

I = Interest

Pythagorean Theorem

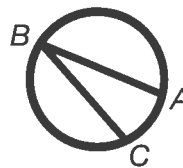
$$a^2 + b^2 = c^2$$

Central Angle



$$m\angle AOB = m\widehat{AB}$$

Inscribed Angle



$$m\angle ABC = \frac{1}{2} m\widehat{AC}$$