Formula Sheet

Area and Circumference

Trapezoid $A = \left(\frac{b_1+b_2}{2}\right)h$

Circle $C = 2\pi r$

$A = \pi r^2$

A = area
b = base
h = height
C = circumference
r = radius

Volume

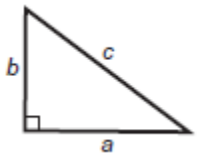
Pyramid/Cone $V = \frac{1}{3}Bh$

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

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

Pythagorean Theorem and Trigonometric Ratios

Pythagorean Theorem: $a^2 + b^2 = c^2$



$$\sin\theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos\theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan\theta = \frac{\text{opposite}}{\text{adjacent}}$$

Points (x_1, y_1) and (x_2, y_2) in the Plane

Midpoint $M = \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

Distance $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Quadratic Equations

Standard Form $ax^2 + bx + c = 0$

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

Probability

P(A) = Probability of event A

P(A|B) = Probability of event A given event B

P(A ∪ B) = Probability of event A or event B

P(A ∩ B) = Probability of event A and event B
