

Formula Sheet

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

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

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

$$y = ax^2 + bx + c$$

$$y = a(x - h)^2 + k$$

$$y = a(x - p)(x - q)$$

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

$$\sin\theta = \frac{O}{H}$$

$$\cos\theta = \frac{A}{H}$$

$$\tan\theta = \frac{O}{A}$$

$$\frac{a}{\sin A} = \frac{b}{\sin B}$$

$$\frac{\sin A}{a} = \frac{\sin B}{b}$$

$$a^2 = b^2 + c^2 - 2bc\cos A$$

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