

MPM2D Formula Sheet

$$y = mx + b$$

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

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

$$y = a(x - r)(x - s)$$

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

$$x^2 + y^2 = r^2$$

$$\sin \theta = \frac{\textit{Opposite}}{\textit{Hypotenuse}}$$

$$\cos \theta = \frac{\textit{Adjacent}}{\textit{Hypotenuse}}$$

$$\tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

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

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

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

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

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

$$r^2 = x^2 + y^2$$