

# PRE-CALCULUS 11 FORMULA SHEET

## Simple Interest

$$A = P(1 + rt) \quad I = Prt$$

## Compound Interest

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

## Trigonometry

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

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

$$\cos A = \frac{(a^2 - b^2 - c^2)}{(-2bc)}$$

## Quadratics

$$f(x) = a(x - p)^2 + q$$

$$f(x) = ax^2 + bx + c$$

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

$$x = \frac{-b}{2a}$$

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

## Nature of Roots

$$b^2 - 4ac > 0 \quad 2 \text{ real \& distinct}$$

$$b^2 - 4ac = 0 \quad 1 \text{ real \& equal}$$

$$b^2 - 4ac < 0 \quad \text{no real (imaginary)}$$