PreCalc 11 Formula Sheet

1. **Arithmetic Sequences and Series:**

$$t_n = t_1 + d(n-1) \qquad S_n = \frac{n}{2}(t_1 + t_n) \qquad S_n = \frac{n}{2}(2t_1 + d(n-1))$$

Geometric Sequences and Series:

$$t_n = t_1 \times r^{n-1} \qquad S_n = \frac{t_1(1-r^n)}{1-r} \qquad S_\infty = \frac{t_1}{1-r}$$

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

Quadratic Funtions:

Standard form of Equation: $\quad y = a(x-p)^2 + q$

General form of Equation: $\quad y = ax^2 + bx + c$

Factored form of Equation: $\quad y = a(x-x_1)(x-x_2)$

Trigonometry:

Sine Law: $\dfrac{a}{SinA} = \dfrac{b}{SinB} = \dfrac{c}{SinC}$ $\qquad$ Cosine Law: $\quad a^2 = b^2 + c^2 - 2bcCosA$

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

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