Formula Sheet - MCR3U Final Exam

Arithmetic Sequence: $t_n = a + d(n-1)$

Geometric Sequence: $t_n = a(r)^{n-1}$

Arithmetic Series: $S_n = \dfrac{n(t_1 + t_n)}{2}$ **OR** $S_n = \frac{n}{2}\left[2a + (n-1)d\right]$

Geometric Series: $S_n = \dfrac{a(r^n - 1)}{r - 1}$ **OR** $S_n = \dfrac{t_{n+1} - t_1}{r - 1}$

Compound Interest: $A = P(1+i)^n$

Annuities: $FV = R \times \dfrac{(1+i)^n - 1}{i}$

$$PV = R \times \frac{1 - (1+i)^{-n}}{i}$$