$$X(t) = A\cos(\omega_o t + \phi)$$

$\frac{\omega_o}{2\pi}$ = frequency - (1/sec)

A = Amplitude

$\frac{2\pi}{\omega_o}$ = period - (sec)

ω_o = Angular frequency - (rads/sec)

t = time (sec)

ϕ = phase (rads)

$f_o = \frac{1}{T}$ Hz

T ← period/length of cycle

$\phi = -2\pi f_o t_o$ - (rads)

$\omega_o = 2\pi f_o$ - (rads/sec)

$A\cos(2\pi f_o t + \phi)$