Angle Formulas for Trigonometry

1 revolution $= 360^\circ$

1 revolution $= 2\pi$ radians ($\theta = 2\pi$ for one revolution)

(so $\theta =$ revolutions $\cdot 2\pi$)

$1^\circ = \frac{\pi}{180}$ radians

1 radian $= \frac{180}{\pi}$ degrees

$s = r\theta$

$A = \frac{1}{2} r^2 \theta$

$V = r\omega$

$1^\circ = 60'$

$1' = 60''$

$V = \frac{s}{t}$

$\omega = \frac{\theta}{t}$

θ is the central angle

θ is measured in radians

s = arc length

r = radius

A = Area of a sector

V = linear speed (velocity) along the circle

ω = angular speed (in radians/time)

$'$ = minutes

$''$ = seconds