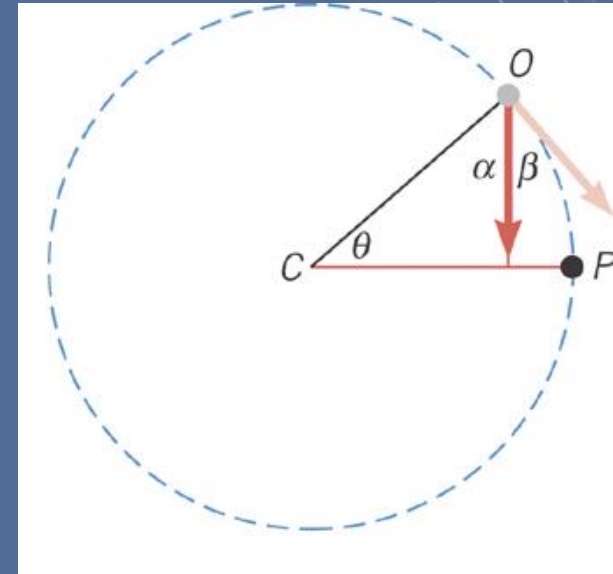


UNIFORM CIRCULAR MOTION

Preview from Notesale.co.uk
Page 2 of 24

$$v = \frac{2\pi r}{T}$$

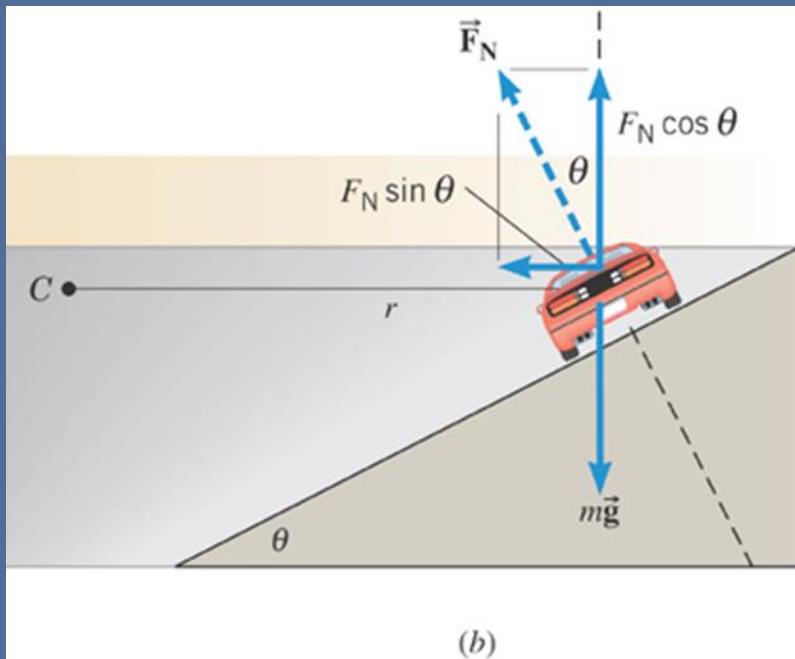
$$T = \text{min/revolutions} = 1/(\text{rev/min})$$



Direction of velocity is tangent to the circle

BANKED CURVE

Preview from [Notesale.co.uk](https://www.notesale.co.uk)
Page 5 of 24



$$\tan \theta = \frac{v^2}{rg}$$

CONSERVATION OF ENERGY

Preview from [Notesale.co.uk](https://www.notesale.co.uk)
Page 22 of 24

$$\frac{1}{2}mv_f^2 + \frac{1}{2}I\omega_f^2 + mgh_f = \frac{1}{2}mv_i^2 + \frac{1}{2}I\omega_i^2 + mgh_i$$

CONSERVATION OF ANGULAR MOMENTUM

Preview from [Notesale.co.uk](https://www.notesale.co.uk)
Page 24 of 24

$$mr_A^2 \frac{v_A}{r_A} = mr_P^2 \frac{v_P}{r_P}$$