

Unit 2: Circular Motion

$$G = 6.67 \times 10^{-11} \text{ N} \cdot \text{m}^2 / \text{kg}^2$$

$$F_g = G \frac{M_1 M_2}{R^2} \quad \text{or} \quad \frac{G \cdot M_1 M_2}{R^2}$$

$$F_g = m \cdot g \qquad g = G \frac{M_1}{R^2} \quad \text{or} \quad \frac{G \cdot M_1}{R^2}$$

$$v_c = \frac{2 \cdot \pi \cdot r}{T} \qquad a_c = \frac{v_c^2}{r} = \frac{4 \cdot \pi^2 \cdot r}{T^2}$$

$$F_f = F_N \cdot \mu = m \cdot g \cdot \mu \qquad \Sigma F_c = m \cdot a_c \qquad T = \frac{60}{\text{RPM}}$$