



$$\sum F_x = 0: N_A \cos 15^\circ - \mu_s N_B = 0$$

$$\sum F_y = 0: N_B + N_A \sin 15^\circ - mg = 0$$

$$\sum M_A = 0: -mg \frac{L}{2} \cos \theta + N_B L \cos \theta - \mu_s N_B L \sin \theta = 0$$

Eliminate N_A and N_B to obtain

$$\tan \theta = \frac{1 - \mu_s \tan 15^\circ}{2\mu_s}$$

$$\text{For } \mu_s = 0.25, \quad \underline{\theta = 61.8^\circ}$$

$$\text{For } \mu_s = 0.50, \quad \underline{\theta = 40.9^\circ}$$