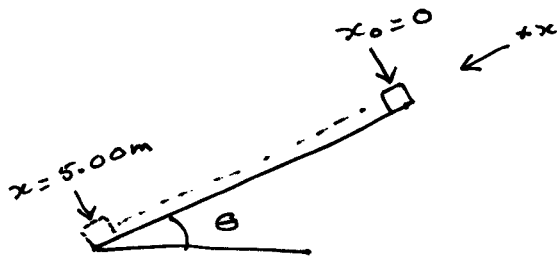
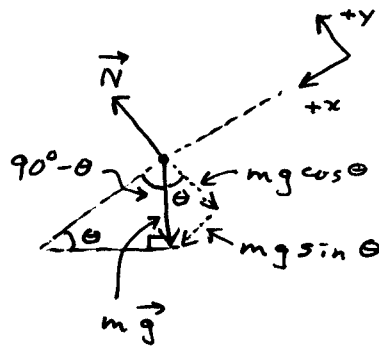


Exercise 8-14



$$x = x_0 + v_{0x}t + \frac{1}{2} a_x t^2$$
$$\therefore 5.00 = 0 + 0 + \frac{1}{2} a_x (1.68)^2$$
$$\therefore a_x = 3.543 \text{ m/s}^2$$

Forces acting on ice:



$$\Sigma F_x = \text{max} \therefore mg \sin \theta = \text{max}$$

$$\therefore \theta = \sin^{-1} \left(\frac{a_x}{g} \right) = \sin^{-1} \left(\frac{3.543}{9.80} \right) = 21.2^\circ$$