

$$\Rightarrow 2T_1 = \frac{ma_{in}}{\cos\theta} + \frac{mg}{\sin\theta}$$

$$T_1 = \frac{m}{2} \left(\frac{a_{in}}{\cos\theta} + \frac{g}{\sin\theta} \right) = 1.04 \text{ N}$$

$$2T_2 = \frac{ma_{in}}{\cos\theta} - \frac{mg}{\sin\theta}$$

$$T_2 = \frac{m}{2} \left(\frac{a_{in}}{\cos\theta} - \frac{g}{\sin\theta} \right) = 0.105 \text{ N}$$