



$$\Sigma F_x = 0 : m_2g - m_1g \sin \theta - m_2g \sin \theta = 0$$

$$m_2 = \frac{m_1 \sin \theta}{1 - \sin \theta}$$

$$\theta = 15^\circ : m_2 = 0.349 m_1$$

$$\theta = 45^\circ : m_2 = 2.41 m_1$$

$$\theta = 60^\circ : m_2 = 6.46 m_1$$

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