

$$F_G = 2.4 \times 10^{-8} \text{ N}$$

$$m_1 = 1.0 \text{ kg}$$

$$r = 1.0 \text{ m}$$

$$F_G = \frac{m_1 \cdot m_2 \cdot G}{r^2}$$

$$(2.4 \times 10^{-8} \text{ N}) = \frac{(1.0 \text{ kg}) \cdot m_2 \cdot (6.67 \times 10^{-11} \text{ N} \cdot \text{m}^2 / \text{kg}^2)}{(1.0 \text{ m})^2}$$

$$m_2 = 360 \text{ kg}$$