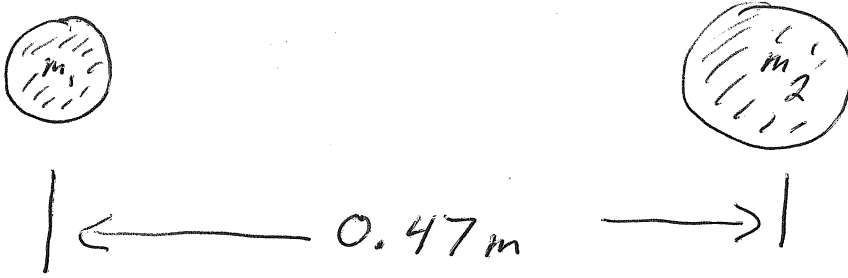


Example



$$m_1 = 1.2 \text{ kg}$$

$$m_2 = 4.7 \text{ kg}$$

Two steel balls are separated as shown above. Show that the gravitational attraction between the balls is small.

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

$$= \frac{6.67 \text{ E } -11 \frac{\text{N m}^2}{\text{kg}^2} (1.2 \text{ kg}) (4.7 \text{ kg})}{(0.47 \text{ m})^2}$$

$$= \boxed{1.7 \text{ E } -9 \text{ N}}$$