

### Answer on Question #69751 Physics / Other

Calculate the gravitational force between two masses of  $m_1 = 455$  kg and  $m_2 = 625$  kg, that are separated by  $r = 0.150$  meters.

#### Solution:

The gravitation force

$$\begin{aligned} F &= G \frac{m_1 m_2}{r^2} \\ &= 6.67 \times 10^{-11} \frac{455 \times 625}{0.150^2} \\ &= 0.843 \times 10^{-3} \text{ N} = 0.843 \text{ mN.} \end{aligned}$$

**Answers:** 0.843 mN.

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