

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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