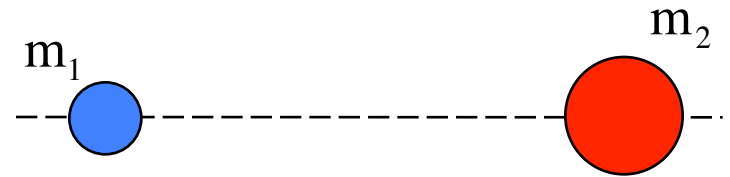


Problem 13.5

You essentially want to know the force between two close balls.



$$\begin{aligned} |\vec{F}| &= \frac{Gm_1m_2}{r^2} \\ &= \frac{(6.67 \times 10^{-11} \text{ N} \cdot \text{m}^2/\text{kg}^2)(1.50 \text{ kg})(.0150 \text{ kg})}{(.0450 \text{ m})^2} \\ &= 7.41 \times 10^{-10} \text{ N} \end{aligned}$$