

$$\frac{1}{6} \quad F = W = \frac{G m_1 m_2}{r^2}$$

where $G = 6.673 (10^{-11}) \text{ m}^3 / (\text{kg} \cdot \text{s}^2)$

$m_1 = 90 \text{ kg}$

$m_2 = 5.976 (10^{24}) \text{ kg}$

and $r = (6371 + 250) (10^3) \text{ m}$

Substitute these numbers $\frac{1}{6}$ obtain $W = 819 \text{ N}$

U.S. units : $W = 819 \text{ N} \left(\frac{1 \text{ lb}}{4.4482 \text{ N}} \right) = \underline{184.1 \text{ lb}}$

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