

Inverse square law:

Gravity $F_g = G \frac{Mm}{r^2}$ $6.67 \times 10^{-11} \frac{N \cdot m^2}{kg^2}$

Electrostatics $F_E = K \frac{Q_1 Q_2}{d^2}$ $9.0 \times 10^9 \frac{N \cdot m^2}{C^2}$

Recall the accel due to gravity of the Earth at the moon's position
 on Earth 9.81, space station 9.7

$a_{cp} = \frac{v^2}{R}$

$v = \frac{2\pi R}{T} = \frac{2\pi (3.8 \times 10^8)}{2.55 \times 10^6} = 1022.1 \text{ m/s}$

$a_{cp} = \frac{(1022.1)^2}{7.38 \times 10^8} = 0.002725$

$2.55 \times 10^6 \text{ S}$

* The moon is almost exactly 60x further from Earth's center than you!

$F_g = G \frac{Mm}{R^2}$

$\times 2 = G \frac{m_1 m_2}{d^2}$

$9.81 \times \frac{1}{(60)^2} = 0.002725$

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