

Physics 122 Universal Gravitation Page 577 - 594

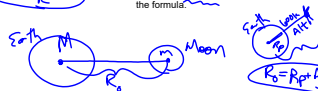
Newton's main achievement was the Law of Universal Gravitation.
 $F_g = GMm/R^2$

greatest *in* *negative* *of* *disturbances*
inverse square law

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

This constant was only determined by Henry Cavendish, 70 years after Newton proposed the formula.

$F_g = \frac{GMm}{R^2}$



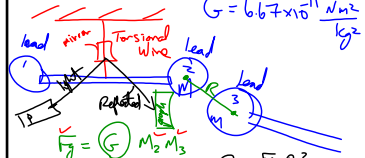
Earth M Moon m

R_0 R_e

$R_0 = R_e + AH$

Henry Cavendish: *proved*

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



lead mirror Torsional Wire lead lead

Reflection

$F_g = \frac{GM_2M_3}{R^2}$

$G = \frac{F_g R^2}{M_2 M_3}$

Apr 23-8:59 AM