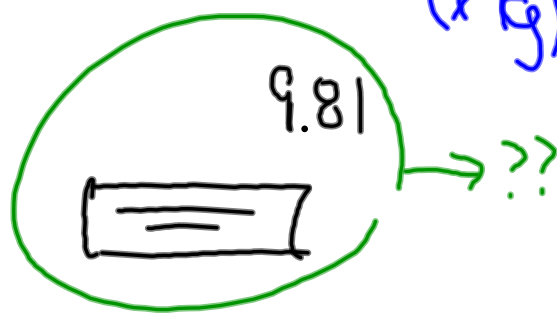


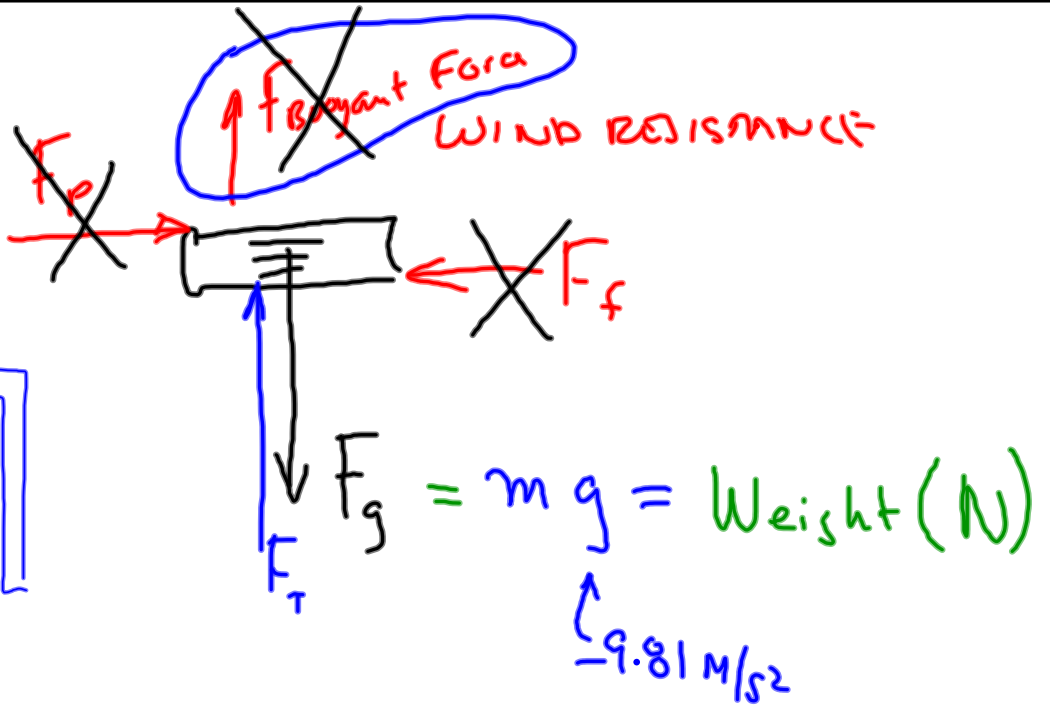
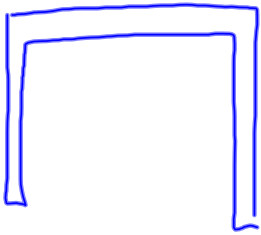


$F_g = \text{Force of Gravity}$   
 $= \text{Weight of Book}$   
 $= mg$   
 $\uparrow \quad \downarrow$   
 $(x \text{ kg}) \quad 9.81 \text{ m/s}^2$



$\sum F's = ma$   
 ~~~~~  
 NET FORCE = 0

when you're either at rest or moving at constant speed  
 THE NET FORCE = 0.



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$$F = G \frac{m_1 m_2}{r^2}$$

90 kg

$8.9 \times 10^{22}$  kg

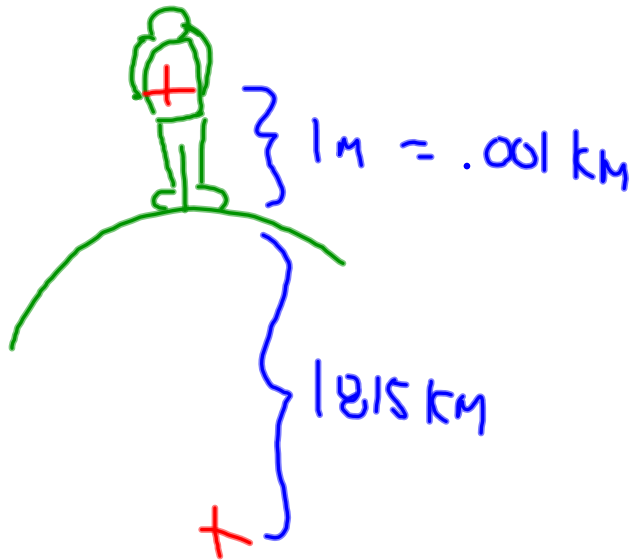
$r^2$  1815 km = 1815000 METERS

$(N)(m)^2$

$N \cdot m^2$

$N \times m^2$

$6.67 \times 10^{-11} \frac{(N)(m)^2}{(kg)^2}$



EMPIRICAL

=> PROVEN BY OBSERVATION