

Weight + mass

mass - the amount of matter in an object (kg)

Weight - the force of gravity acting on an object; it depends on location. (N) (Newton)

$$F_g = mg$$

Where F_g is the force of gravity (N)

m is the mass (kg)

g^* is the acceleration due to gravity (m/s^2)

* depends on the location

* we use $9.8 m/s^2$ near the earth's surface

MP/135

$$m = 4.0 \text{ kg}$$

$$g_{\text{moon}} = 1.64 \text{ m/s}^2$$

$$F_g = ??$$

$$F_g = mg$$

$$\text{kg} \cdot \text{m/s}^2 = 1 \text{ N}$$

$$F_g = (4.0 \text{ kg})(1.64 \text{ m/s}^2)$$

$$F_g = 6.56 \text{ N}$$

$$\boxed{F_g = 6.6 \text{ N}}$$

	F_g	$\xrightarrow{\div 9.8 \text{ m/s}^2}$ $m \text{ (kg)}$	$\xrightarrow{\times 2.2}$ $m \text{ (lb)}$
M	555 N	56.6 kg	124 lbs
D	675 N	68.8 kg	151 lbs
B	625 N	63.7 kg	140 lbs
M2	775 N	79.0 kg	174 lbs
J	765 N	78.0 kg	172 lbs

TODO:

- ① Read p126-128
- ② PP | 137