

Weight + Mass

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

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

$$F_g = m g$$

Where F_g is the force of gravity (N)
 m is the mass (kg)

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

* $g = 9.81 m/s^2$ near the earth's surface

(depends on the location)

MP/135

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

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

$$F_g = ??$$

$$F_g = m g$$

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

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

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

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

	F_g	$\xrightarrow{\div 9.8 \text{ m/s}^2}$ $m(\text{kg})$	$\xrightarrow{\times 2.2}$ $m(\text{lb})$
S	485 N	49.5 kg	109 lb
R	670 N	68.3 kg	150 lb
M	865 N	88.2 kg	194 lb

To DO:

- ① Read p126-128
- ② PP137