

Chapter 4 - Introduction to Forces

Inertia - see definition on p126

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

- mass does not change with location

Weight - the force of gravity acting on an object

- Weight depends on location (N)

$$F_g = mg$$

where m is the mass (kg)

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

F_g is the weight (N)

↓
depends
on location

NOTE: $1N = 1kg \cdot m/s^2$

MP|135

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

$$\text{moon } \vec{g} = 1.64 \text{ m/s}^2 \text{ [down]}$$

$$\vec{F}_g = ?$$

$$\vec{F}_g = m\vec{g}$$

$$\vec{F}_g = (4.0 \text{ kg})(1.64 \text{ m/s}^2 \text{ [down]})$$

$$\vec{F}_g = 6.6 \text{ N [down]}$$

TO DO: PP|137

Check the links + read over