**Quantities and Units**

The SI units are a standard system of units, used internationally (“Système International d’unités”). These are the **base** ones you will use:



These **derived** units are compound units built from the base units.



Can you convert 2.48 x 105 kmh-1 into SI units?

**Types of Force and Force Diagrams**

You will encounter a variety of forces in mechanics. It is ALWAYS helpful to draw a force diagram and make sure that you have included all forces acting on a body.

* Weight (always vertically downwards)
* Normal Reaction (always perpendicular to the surface of contact)
* Friction (only if the plane is ROUGH, always opposes motion)
* Tension (in a string – PULL force)
* Thrust/compression (e.g. in a rod or engine – PUSH force)
* Resistance (e.g. particle travelling through a liquid, always opposes direction of motion)
* Buoyancy (e.g. boat floating in water, always vertically upwards)

Force diagrams can be found on page 123 of the textbook.

Exercise 8C Page 124