Newtons 3 Laws:

1) A body in motion wants to stay in motion unless acted upon by an external force.

2) The rate of change of momentum is proportional to the Force and takes place in the direction of the force.

3) Every action has an opposite and equal reaction.

MV is momentum.

T is rate of change.

Vector/Scalar:

\*A vector has direction attached to it whilst a scalar does not.

\*A scalar is only magnitude not a direction.

Unit of Power

Formula for Power -> Power = Work / Time

 1: 1: 1

Waves:

A = Constructive interference

B = Diffractive grating

Photoelectric effect:

\*Photoelectric affect is the release of an electron from the surface of a metal when UV light shines on it.

Transverse Wave:

\*In a transverse wave, the vibration is perpendicular to the direction of the energy transfer. E.G. Wave on a rope.

E= hf

Planks constant – 6.6x(-34) x frequency 1.2x10(15) = 7.9x10(-19)

Boyles

\*Boyles Law states that the pressure of a fixed mass of gas is inversely proportional to the volume at a constant temperature.

P=1/v.

Thermometric Property

\*Something that changes measurably with temperature.

Examples: Length of a liquid in a column

Fuse: Melts / Blows when the current is too high it stops the flow of current.

Electromagnetic Induction is when current is produced when there Is a charge in a magnetic flux.

A current carrying conductor experiences a force in a magnetic field.

Radioactivity means the decay of a nuclear emitting radiation.

Alpha – Helium Nucleus (Positive)

Beta – high speed electron (Negative)

Gamma – High energy electromagnetic wave