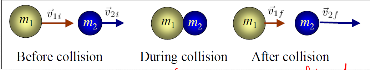
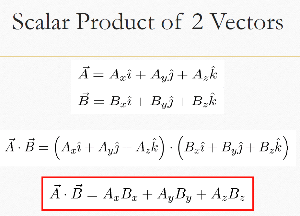
A screen shot of a computer

Description automatically generatedA close-up of a paper

Description automatically generatedA white rectangular box with black text

Description automatically generatedA white background with black text

Description automatically generatedA square root of a mathematical equation

Description automatically generated­­

Moment of Inertia for different objects

A diagram of a cylinder

Description automatically generated

A group of math equations

Description automatically generated

Moment of Inertia

A math equations on a white paper

Description automatically generated

A close up of text

Description automatically generated

Parallel axis theorem A text on a white background

Description automatically generated

Angular Motion (Rotational motion of body)

A white paper with black text

Description automatically generatedA math equations with red squares

Description automatically generated with medium confidence

Kinematics (Angular vs Linear)

A set of black symbols

Description automatically generated with medium confidence A math equations and formulas

Description automatically generated with medium confidence

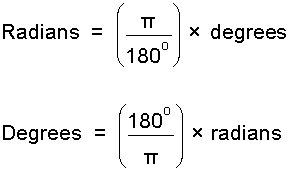
θ – θ0 = 1/2(ω0 + ω) t

A diagram of a hand and a hand pointing at a hand

Description automatically generated with medium confidenceA close up of words

Description automatically generated

θ => can be use to find m and angle/rad



Centre of Mass (Shaped object)

Xcm = A math equation with plus and two symbols

Description automatically generated with medium confidence

Centre of Mass (System of particles)

A math equation with black letters and numbers

Description automatically generated with medium confidence

Centre of Mass (Extended Object)

A math equation with a red border

Description automatically generated

Characteristics of CM

A close up of a text

Description automatically generated

Centre of mass (Right angle triangle)

A square with black numbers and a red border

Description automatically generated A white rectangular sign with black text

Description automatically generated

Centre of mass (Cone)

A close up of a letter

Description automatically generated with medium confidence

Motion of system of particles

A diagram of a equation

Description automatically generatedA screenshot of a white paper with text

Description automatically generated

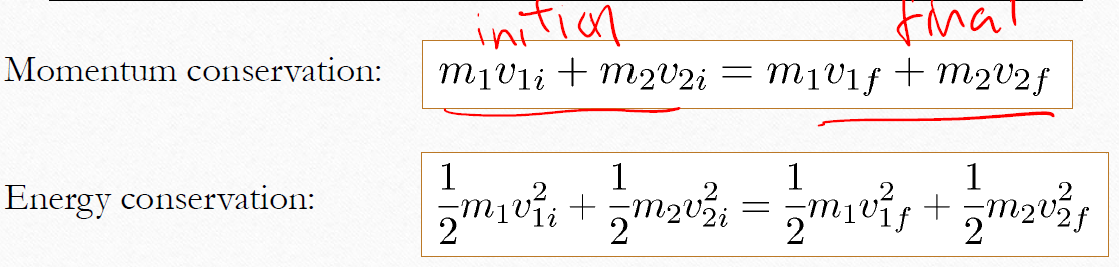
Momentum and Collision

P = mv (Momentum)

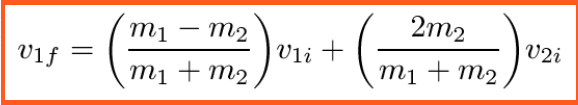
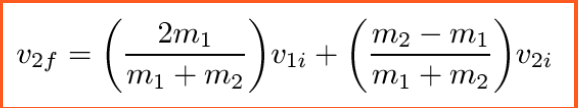
P = KE =

**Remember where all forces and momentum are present.**

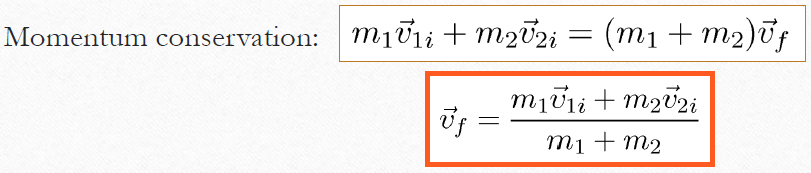
Elastic Collision



Final Velocity

Inelastic Collision



Inelastic Collision

**Momentum found at collision.**

Properties of conservative force

Force is independent of path.

Force at end = Force at start

Power

P = mv(Momentum)

Pav = W/t

SI unit : Watt(W)

1 horsepower = 746W

1 kWh = 103 x 3600 Ws = 3.6 MJ

Reminder

F = μmg = ma = mg

J = F x T

Work Done

**W = F . S(Constant)**

**W = KE = ½mv^2(Kinetic)**

**W = GPE = mgh(Gravitational)**

**W = SE = ½kx^2(Spring)**

**W = KE = ½mv^2­­f – ½v^2i**

**W = KEf + GPEf = KEi + GPEi**

**(Same idea for GPE & SE when displacement occur)**

**Momentum from start and end is the same(conserved)** 

**Mechanical energy (ME) = KE = GPE = SE**