Module 7: Momentum and Impulse

Keywords: momentum, impulse, collision, explosion

Formulas:

$\vec{p} = m\vec{v}$ - momentum

$J = \Sigma F \Delta t = \Delta p$ - impulse

$\Sigma p_1 = \Sigma p_2 = \text{const.}$

Key points:

- Momentum is <u>always</u> conserved in a closed system.
- Change in momentum (impulse) is the area under the curve of ΣF vs. time graph.

General approach:

- Identify the system (colliding objects, parts of exploading object)
- Apply conservation of momentum.

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