

Impulse-Momentum

Force vs Time Graphs

- Shows how the force acting on an object changes with time.
- Can be used to find the impulse and thus the momentum change during the time interval that the force acts.
- Calculating the area under the curve (between the curve and the x-axis) over a time interval gives the impulse imparted during that time interval.
- By the Impulse-Momentum principle, the area not only gives the impulse imparted to the object, but also the change in the object's momentum as well.
- By knowing the impulse and change in momentum from the graph area, initial and final speeds can be found.