

Definitions and Concepts for Edexcel Physics A Level

Topic 6: Further Mechanics

Angular Displacement: In circular motion, the angle turned through. Measured in radians or degrees.

Angular Velocity: The angular displacement per unit time, measured in radians or degrees per second. It is different from angular speed as it is defined in either a clockwise or anticlockwise direction.

Centripetal Acceleration: As a body follows an orbit its direction constantly changes, this produces a constantly changing velocity and the centripetal acceleration is needed to cause this change in velocity.

Centripetal Force: A force felt towards the centre of an object's orbit due to the centripetal acceleration.

Conservation of Momentum: In a closed system with no external forces the momentum of the system before an event is equal to the momentum of the system after the event.

Elastic Collision: When the kinetic energy of a system before an event is equal to the kinetic energy of the system after the event.

Impulse: The change of momentum of an object when a force acts on it. Equal to the area underneath a force-time graph.

Inelastic Collision: When the kinetic energy of a system before an event is not equal to the kinetic energy of the system after the event. The kinetic energy has been transferred to other forms.

