

Kinematics

PH11-8

2 inquiry questions · 10 dot points

1 How is the motion of an object moving in a straight line described and predicted?

- describe uniform straight-line (rectilinear) motion and uniformly accelerated motion through:...
- conduct a practical investigation to gather data to facilitate the analysis of instantaneous and average velocity through:...
- calculate the relative velocity of two objects moving along the same line using vector analysis
- conduct practical investigations, selecting from a range of technologies, to record and analyse the motion of objects in a variety of situations in one dimension in order to measure or calculate:...
- use mathematical modelling and graphs, selected from a range of technologies, to analyse and derive relationships between time, distance, displacement, speed, velocity and acceleration in rectilinear motion, including:...

2 How is the motion of an object that changes its direction of movement on a plane described?

- analyse vectors in one and two dimensions to:...
- represent the distance and displacement of objects moving on a horizontal plane using:...
- describe and analyse algebraically, graphically and with vector diagrams, the ways in which the motion of objects changes, including:...
- describe and analyse, using vector analysis, the relative positions and motions of one object relative to another object on a plane
- analyse the relative motion of objects in two dimensions in a variety of situations, for example:...