

# Further Mechanics 1



### Linear Momentum

Momentum in one direction, conservation of linear momentum, momentum of a vector.



### Work, Energy and Power

Work done, kinetic and potential energy, conservation of mechanical energy, power, work energy principle



### Hooke's Law

Hooke's law and equilibrium problems, Hooke's law and dynamics problems.



### Elastic Energy

Energy contained in a compressed spring or a stretched spring, problems involving elastic energy.



### Elastic collisions in one dimension

Newton's coefficient of restitution, direct collision with a smooth plane.



### Collisions and kinetic energy

Loss of kinetic energy during collisions, the types of energy that are converted when a collision occurs.



### Elastic collisions in two dimensions

Successive direct impacts, vector methods, problem solving techniques.



### Oblique collisions

The meaning of an oblique impact, oblique impacts with flat surfaces.



### Sphere - Sphere Collisions

Oblique impacts between two spheres and the mathematics required to solve problems, relate to sports and consider limitations in the model.



### Revision

Exam questions

