Corbettmaths

$s = \frac{1}{2}(u + v)t$

Mechanics

Video Tutorial

s - displacement (m)
u - initial velocity (m/s)
v - final velocity (m/s)
t - time (seconds)

A car is travelling along a straight road.
It accelerates at a constant rate from a speed of 6m/s to a speed of 20m/s in 11 seconds.
Work out the distance the car travelled during these 11 seconds.

A lorry is driving in a straight line from point A to point B with constant deceleration.
The distance between A and B is 126m.
The speed of the lorry at A is 18m/s and the speed of the lorry at B is 3m/s.
How long does it take the lorry to travel from A to B?

A particle travels in a straight line, with constant acceleration, from A to B.
The distance between A and B is 320m.
The particle takes 40 seconds to travel from A to B and passes point B with a speed of 12m/s.
Work out the speed of the particle when it passed point A.