Corbettmaths

$v = u + at$

Mechanics

Video Tutorial

v - final velocity (m/s)
u - initial velocity (m/s)
a - acceleration (m/s^2)
t - time (seconds)

A particle travels in a straight line with a constant acceleration of $1.2m/s^2$
The particle passes the point A with a speed of 10m/s
6 seconds later the particle passes the point B.
Work out the speed of the particle as it passes point B.

A bus is travelling along a straight road.
It accelerates at a constant rate from a speed of 2m/s to a speed of 30m/s in 16 seconds.
Find the acceleration of the bus.

A train is approaching a platform.
When it passes a signal, the train begins to decelerates at a rate of $0.75m/s^2$ until it comes to rest at the platform. The train is travelling at 21m/s when it passes the signal.
Work out how long it takes for the train to travel from the signal to the platform.