Kinematics

Speed = $\frac{\text{distance}}{\text{time}}$

shortcuts

mm $\xrightarrow{10}$ cm $\xrightarrow{100}$ m $\xrightarrow{1000}$ km

sec $\xrightarrow{60}$ min $\xrightarrow{60}$ h

10 m/s → km/h

$\frac{10\ m}{1s}$ ÷1000 ÷3600

$\frac{10}{1} \times \frac{3600}{1000}$

= 36 km/h

30 km/h → m/s

$\frac{30\ km}{1h}$ x 1000 x 3600

$30 \times \frac{1000}{3600}$

= 8.33 m/s

Acceleration: tells us if a body is speeding up or slowing down

Initial = u

Final = v