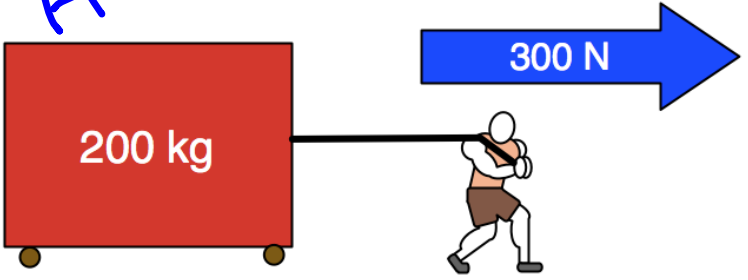
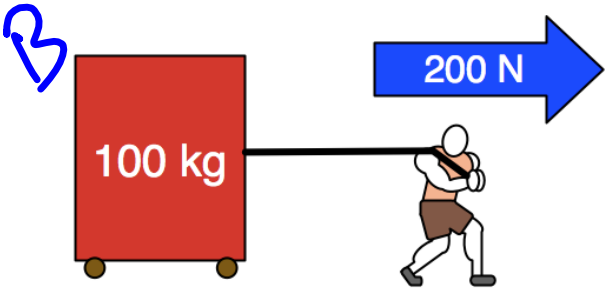
What is the speed change?

A



$$\frac{300\ N}{200\ kg} = 1.5\ \frac{N}{kg}$$

B



$$\frac{200\ N}{100\ kg} = 2\ \frac{N}{kg}$$

Who changes speed more rapidly?

Look at the ratio of force to mass:

$$\frac{\text{net FORCE (N)}}{\text{mass (kg)}} = \text{speed change factor}$$

Speed is measured with...

speedometers

Speed is measured in...

miles per hour $\frac{\text{mi}}{\text{hr}}$

meters per second $\frac{\text{m}}{\text{s}}$

SPEED UPS are measured in...

gain 5 $\frac{\text{m}}{\text{s}}$ every second

SLOW DOWNS...

lose 5 $\frac{\text{m}}{\text{s}}$ every second

The car is initially moving with a speed of 10 m/s **.**

The speed change factor is 2 m/s every second **.**

Speed at t = 0s	Speed at t = 1s	Speed at t = 2s	Speed at t = 3s
10 m/s	12 m/s	14 m/s	16 m/s