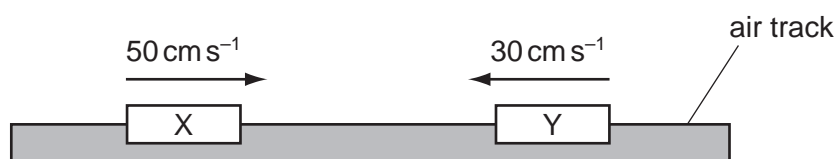**10** Two equal masses X and Y are moving towards each other on a frictionless air track as shown. The masses make an elastic collision.

Which row gives possible velocities for the two masses after the collision?

	velocity of X	velocity of Y
A	zero	$20\,\text{cm}\,\text{s}^{-1}$ to the right
B	$10\,\text{cm}\,\text{s}^{-1}$ to the right	$10\,\text{cm}\,\text{s}^{-1}$ to the right
C	$20\,\text{cm}\,\text{s}^{-1}$ to the left	zero
D	$30\,\text{cm}\,\text{s}^{-1}$ to the left	$50\,\text{cm}\,\text{s}^{-1}$ to the right

11 A car of mass 750 kg has a horizontal driving force of 2.0 kN acting on it. It has a forward horizontal acceleration of $2.0\,\text{m}\,\text{s}^{-2}$.
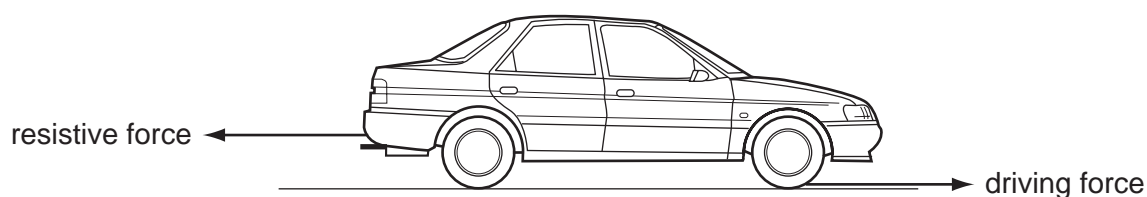
What is the resistive force acting horizontally?

A　0.5 kN　　　　**B**　1.5 kN　　　　**C**　2.0 kN　　　　**D**　3.5 kN

12 A ball is falling at terminal speed in still air. The forces acting on the ball are upthrust, viscous drag and weight.

What is the order of increasing magnitude of these three forces?

A　upthrust → viscous drag → weight

B　viscous drag → upthrust → weight

C　viscous drag → weight → upthrust

D　weight → upthrust → viscous drag