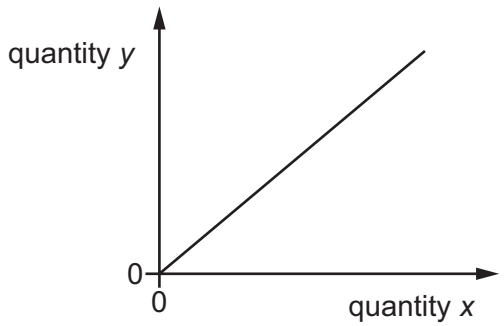
8 The graph shows the variation of a quantity *y* with a quantity *x* for a body that is falling in air at constant (terminal) velocity in a uniform gravitational field.



Which quantities could *x* and *y* represent?

	x	*y*
A	air resistance	acceleration
B	loss of height	gain in kinetic energy
C	loss of potential energy	work done against air resistance
D	time	velocity

9 A ball of mass 2.0 kg travels horizontally with a speed of 4.0 m s^{-1}. The ball collides with a wall and rebounds in the opposite direction with a speed of 2.8 m s^{-1}. The time of the collision is 150 ms.

What is the average force exerted on the wall?

A 16 N **B** 37 N **C** 53 N **D** 91 N

10 An ice-hockey puck of mass 150 g moves with an initial speed of 2.0 m s^{-1} along the surface of an ice rink.

The puck slides a distance of 30 m in a straight line before stopping.

What is the average frictional force acting on the puck?

A 0.010 N **B** 0.020 N **C** 0.067 N **D** 0.44 N