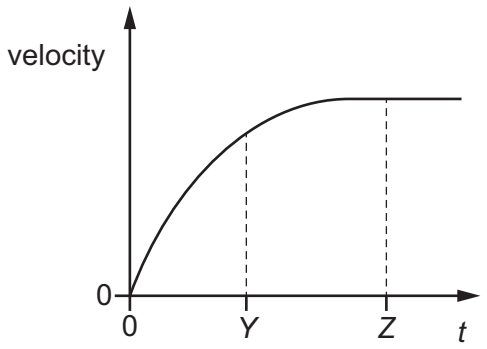
9 An object falls from a tall building.

The graph shows how the velocity of the object changes with time *t*.



The acceleration of free fall is *g*.

What describes the acceleration of the object at times $t = Y$ and $t = Z$?

	acceleration at $t = Y$	acceleration at $t = Z$
A	decreasing	*g*
B	decreasing	0
C	constant	*g*
D	constant	0

10 Two balls, one of mass 2*m* and one of mass *m*, collide.

The diagrams show the initial and final velocities of the balls.

Which collision is **not** elastic?

	before collision	after collision
A	2*m* 4.0 m s^{-1} → *m* 1.0 m s^{-1} →	2*m* 2.0 m s^{-1} → *m* 5.0 m s^{-1} →
B	2*m* 6.0 m s^{-1} → *m* 3.0 m s^{-1} →	2*m* 4.0 m s^{-1} → *m* 7.0 m s^{-1} →
C	2*m* 8.0 m s^{-1} → *m* 2.0 m s^{-1} →	2*m* 5.0 m s^{-1} → *m* 8.0 m s^{-1} →
D	2*m* 10.0 m s^{-1} → *m* 4.0 m s^{-1} →	2*m* 6.0 m s^{-1} → *m* 12.0 m s^{-1} →