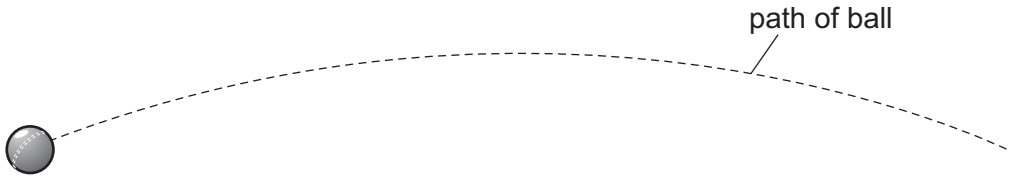
8 A ball is thrown across a flat field.



Which statement describes the motion of the ball, when the effects of air resistance are ignored?

A The ball lands with the same velocity at which it is thrown.

B The horizontal component of acceleration is constant throughout the motion.

C The horizontal and vertical components of acceleration are both zero at the highest point of the motion.

D The horizontal and vertical components of velocity are both zero at the highest point of the motion.

9 Which statement **defines** force?

A When a force acts on a body that is free to move, the force is the product of the mass of the body and its acceleration.

B When a force acts on a body that is free to move, the force is the rate of change of momentum of the body.

C When a force acts on a body that is free to move, the force is the work done by the force divided by the distance moved by the body.

D When a force acts on a lever and causes a moment, the force is the moment divided by the perpendicular distance of the force from the pivot.