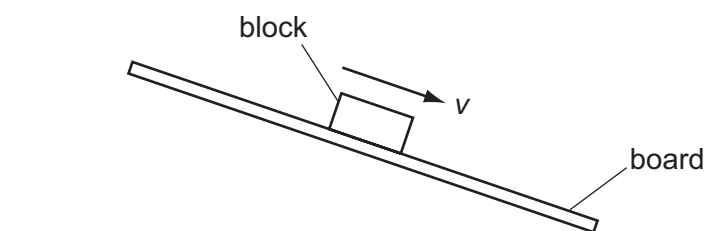**13** A wooden block rests on a rough board. The end of the board is then raised until the block slides down the plane of the board at constant velocity v.

Which row describes the forces acting on the block when sliding with constant velocity?

	frictional force on block	resultant force on block
A	down the plane	down the plane
B	down the plane	zero
C	up the plane	down the plane
D	up the plane	zero

14 A ball of mass m is thrown up to height h in air with an initial velocity v, as shown.
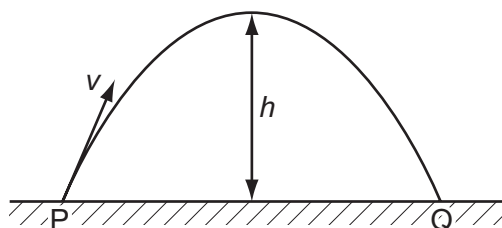
Air resistance is considered negligible. The acceleration of free fall is g.

What is the **total** work done by the gravitational force on the ball during its flight from P to Q?

A zero   **B** $\frac{1}{2}mv^2$ **C** mgh **D** $2mgh$

15 A spring of unextended length 40 mm is suspended from a fixed point. A load of 16 N is applied to the free end of the spring. This causes the spring to extend so that its final length is five times its original length. The spring obeys Hooke's Law.

What is the energy stored in the spring due to this extension?

A 1.3 J   **B** 1.6 J   **C** 2.6 J   **D** 3.2 J

Space for working