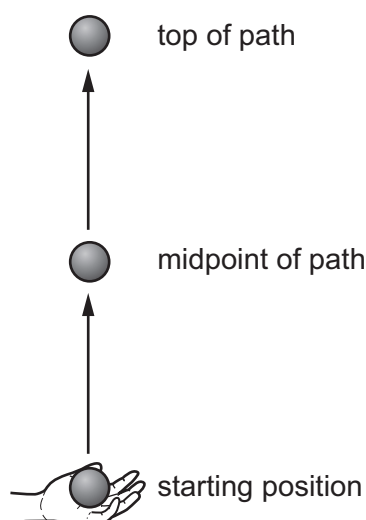


- 16 A ball is thrown vertically upwards into the air. It rises to the top of its path before beginning to fall vertically downwards.



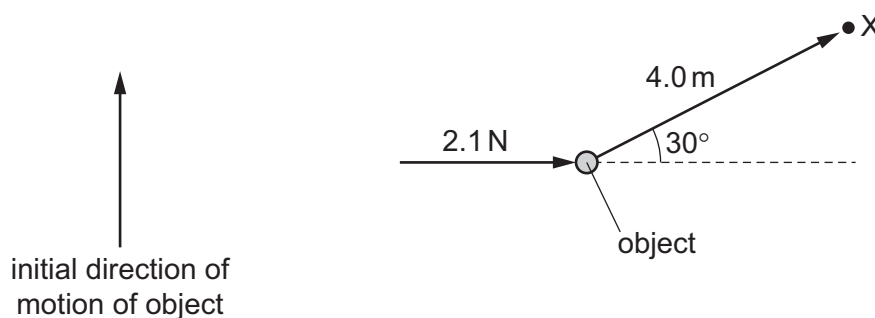
Assume that the gravitational potential energy of the ball is zero at its starting position.

Which statement about the ball is **not** correct?

- A As it rises, its kinetic energy is transferred to gravitational potential energy.
- B At the midpoint of its path, its gravitational potential energy is equal to its initial kinetic energy.
- C At the top of its path, its kinetic energy is zero.
- D At the top of its path, its total energy is less than its initial total energy.

- 17 An object slides with constant velocity across a horizontal sheet of ice. Friction is negligible.

A constant horizontal force of 2.1 N is then applied to the object as shown.



A short time after applying the force, the object reaches point X at a displacement of 4.0 m from its position when the force was first applied.

What is the work done by the force on the object as it travels to point X?

- A 4.2 J
- B 4.8 J
- C 7.3 J
- D 8.4 J