

- 6** An object has an initial velocity u and an acceleration a . The object moves in a straight line through a displacement s and has final velocity v .

The above quantities are related by the equation shown.

$$v^2 = u^2 + 2as$$

Which condition **must** be satisfied in order for this equation to apply to the motion of the object?

- A** The direction of a is constant and the direction of a is the same as the direction of s .
- B** The direction of a is constant and the direction of a is the same as the direction of u .
- C** The magnitude of a is constant and the direction of a is constant.
- D** The magnitude of a is constant and the direction of a is the same as the direction of v .