

**7** A sphere X collides head on with a second identical sphere Y which is stationary.

The mass of each sphere is 0.15 kg.

Sphere X is travelling at a velocity of 2.0 m/s before the collision and produces an impulse of 0.21 N s on sphere Y.

What is the velocity of sphere X after collision?

- A** 0.60 m/s in the opposite direction to Y
- B** 0.60 m/s in the same direction as Y
- C** 1.4 m/s in the opposite direction to Y
- D** 1.4 m/s in the same direction as Y