

- 5** A sphere of mass 3.0 kg travelling due North at 2.0 m s^{-1} collides with another sphere of mass 4.0 kg travelling due East at 2.0 m s^{-1} .

The magnitude of their resultant momentum after the collision will be

- A** 2.0 kg ms^{-1} .
- B** 10 kg m s^{-1} .
- C** 14 kg m s^{-1} .
- D** dependent on whether the collision is elastic or inelastic.

- 6** A block and a sphere of equal mass m are placed on an inclined plane. If the maximum frictional