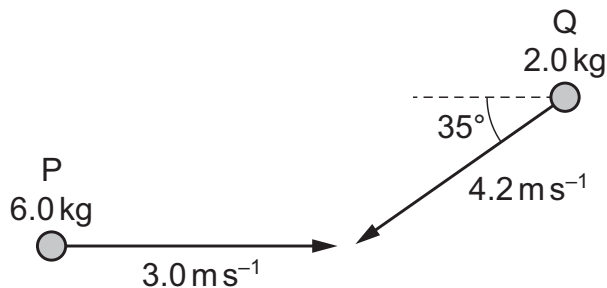


7 Objects P and Q form an isolated system.

Object P has mass 6.0 kg and is moving at a speed of 3.0 m s^{-1} .

Object Q has mass 2.0 kg and is moving at a speed of 4.2 m s^{-1} at an angle of 35° to the path of P.



Objects P and Q collide and stick together.

What is the magnitude of the component of the final momentum of the combined objects in the original direction of P?

- A** 9.6 kg m s^{-1} **B** 11 kg m s^{-1} **C** 13 kg m s^{-1} **D** 25 kg m s^{-1}