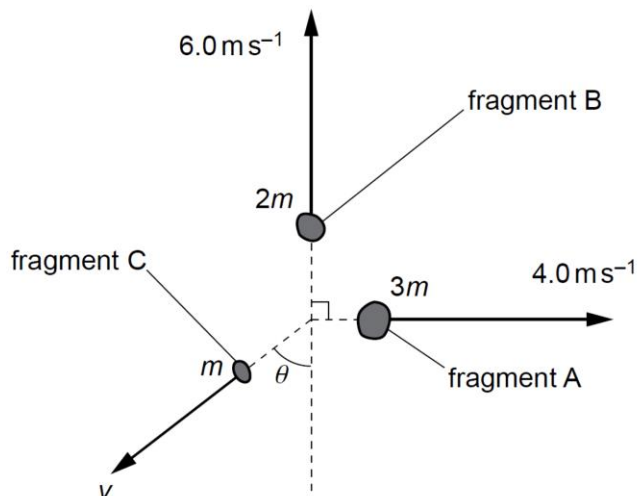**7** A firework is initially stationary. It explodes into three fragments A, B and C that move in a horizontal plane, as shown in the view from above.

Fragment A has a mass of $3m$ and moves away from the explosion at a speed of 4.0 m s^{-1}.

Fragment B has a mass of $2m$ and moves away from the explosion at a speed of 6.0 m s^{-1} at right angle to the direction of A.

Fragment C has a mass of m and moves away from the explosion at a speed v and at an angle θ as shown.

What is the angle θ ?

A   30°   **B**   45°   **C**   60°   **D**   70°