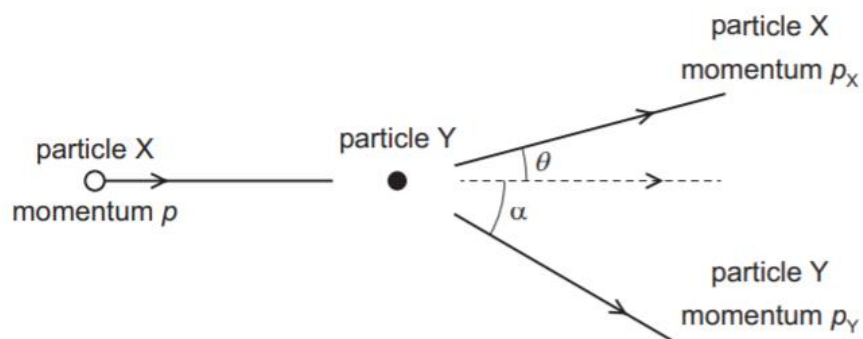


- 5 A particle X has initial momentum p . It collides with a stationary particle Y. The particle X is deflected through angle θ and its momentum is p_x . The particle Y moves off at angle α to the original direction of motion of particle X with momentum p_y as shown.



Which equation is a correct statement for momentum in this collision?

- A $p_x \cos \theta = p_y \cos \alpha$
- B $p_x \sin \theta = p_y \sin \alpha$
- C $p = p_x + p_y$
- D $p = p_x \sin \theta + p_y \sin \alpha$

