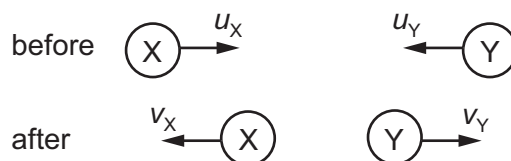


- 10 Two balls, X and Y, approach each other along the same straight line and collide. The collision is perfectly elastic.

Their initial speeds are  $u_X$  and  $u_Y$  respectively. After the collision they move apart with speeds  $v_X$  and  $v_Y$  respectively. Their directions are shown.

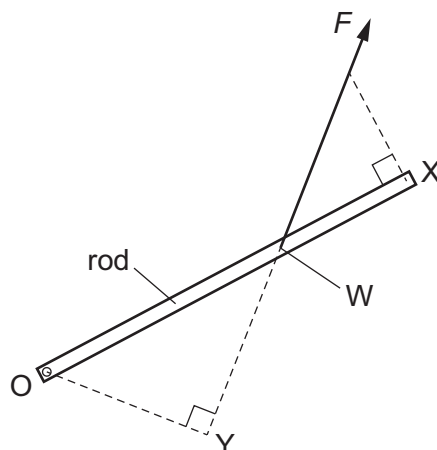


Which equation is correct?

- A  $u_X + u_Y = v_X + v_Y$
- B  $u_X + u_Y = v_X - v_Y$
- C  $u_X - u_Y = v_X + v_Y$
- D  $u_X - u_Y = v_X - v_Y$

- 11 A rod is pivoted at point O.

A force  $F$  is applied to the rod at point W, as shown.



What is the moment of the force  $F$  about O?

- A  $F \times \text{distance OX}$
- B  $F \times \text{distance OY}$
- C  $F \times \text{distance WO}$
- D  $F \times \text{distance WX}$