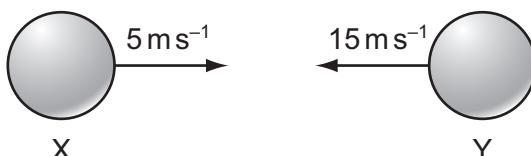


- 12 Two balls X and Y are moving towards each other with speeds of  $5\text{ ms}^{-1}$  and  $15\text{ ms}^{-1}$  respectively.



They make a perfectly elastic head-on collision and ball Y moves to the right with a speed of  $7\text{ ms}^{-1}$ .

What is the speed and direction of ball X after the collision?

- A  $3\text{ ms}^{-1}$  to the left
- B  $13\text{ ms}^{-1}$  to the left
- C  $3\text{ ms}^{-1}$  to the right
- D  $13\text{ ms}^{-1}$  to the right