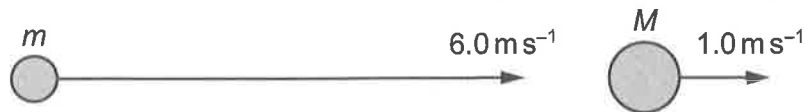


- 16 A ball of mass  $m$ , travelling at  $6.0 \text{ ms}^{-1}$ , collides elastically with a ball of mass  $M$  travelling at  $1.0 \text{ ms}^{-1}$ . Mass  $m$  is smaller than mass  $M$ .



Which diagram represents the velocities of the two balls after the collision?

- A
- 
- Diagram A: After collision, ball  $m$  moves right at  $1.0 \text{ ms}^{-1}$  and ball  $M$  moves right at  $6.0 \text{ ms}^{-1}$ .
- B
- 
- Diagram B: After collision, ball  $m$  moves right at  $1.5 \text{ ms}^{-1}$  and ball  $M$  moves right at  $1.5 \text{ ms}^{-1}$ .
- C
- 
- Diagram C: After collision, ball  $m$  moves left at  $3.0 \text{ ms}^{-1}$  and ball  $M$  moves right at  $2.0 \text{ ms}^{-1}$ .
- D
- 
- Diagram D: After collision, ball  $m$  moves left at  $4.0 \text{ ms}^{-1}$  and ball  $M$  moves right at  $3.0 \text{ ms}^{-1}$ .

- 17 The force applied to a wire is increased from zero and then decreased to zero. The variation of