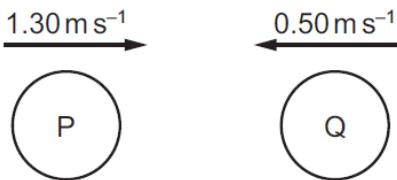


- 4 Two balls P and Q, of equal mass, move along a straight line directly towards each other as shown.

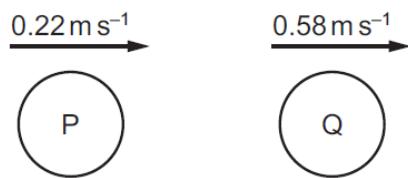


Ball P has velocity  $1.30 \text{ m s}^{-1}$  to the right. Ball Q has velocity  $0.50 \text{ m s}^{-1}$  to the left.

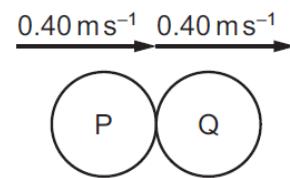
P and Q collide with one another. The collision is perfectly elastic and the total momentum is conserved.

Which diagram correctly shows the motion of P and Q after the collision?

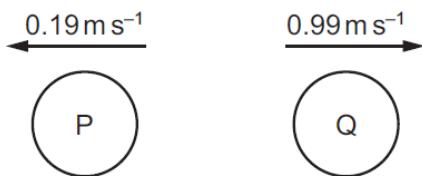
A



B



C



D

