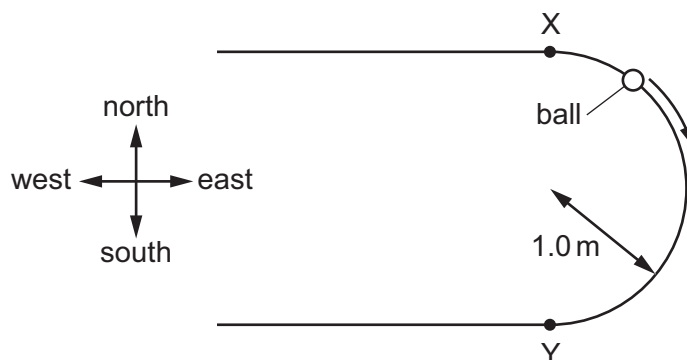


- 8 A ball travels from point X to point Y around a semi-circular track of radius 1.0 m as shown.



What is the displacement of the ball from X to Y?

- A 2.0 m  
 B 2.0 m due south  
 C 3.1 m  
 D 3.1 m due south
- 9 Which row in the table gives the quantities that are conserved in a perfectly elastic collision between two gas molecules?

	total momentum	total kinetic energy
A	conserved	conserved
B	conserved	not conserved
C	not conserved	conserved
D	not conserved	not conserved

- 10 Two equal masses travel towards each other on a frictionless track at speeds of  $60 \text{ cm s}^{-1}$  and  $30 \text{ cm s}^{-1}$ . They stick together on impact.



What is the speed of the masses after impact?

- A  $15 \text{ cm s}^{-1}$       B  $20 \text{ cm s}^{-1}$       C  $30 \text{ cm s}^{-1}$       D  $45 \text{ cm s}^{-1}$