

BRAIN INTERNATIONAL SCHOOL

PHYSICS ASSIGNMENT

CLASS IX

April, 2021

1. An object is moving in a circle of radius r . Calculate the distance and displacement
 - (i) when it completes half the circle.
 - (ii) when it completes one full circle.
2. A particle moves 3 m north, then 4m east and finally 6 m south. Calculate the distance travelled and the displacement.
3. A body thrown vertically upwards reaches a maximum height h . It then returns to ground. Calculate the distance travelled and the displacement.
4. A body travels a distance of 15 m from A to B and then moves a distance of 20m at right angles to AB. Calculate the total distance travelled and the displacement.
5. A particle is moving in a circle of diameter 5 m. Calculate the distance covered and the displacement when it completes 3 revolutions.
6. An object has moved through a distance. Can it have zero displacement? if yes, support your answer with an example.
7. A farmer moves along the boundary of a square field of side 10 m in 40s. what will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds?
8. Which of the following is true for displacement?
 - (a) It cannot be zero.
 - (b) Its magnitude is greater than the distance travelled by the object.
9. An athlete completes one round of a circular track of diameter 200m in 40s.what will be the distance covered and the displacement at the end of 2 minutes 20 s?
10. The numerical ratio of displacement to distance for a moving object is
 - (a) always less than 1
 - (b) always equal to 1
 - (c) always more than 1
 - (d) equal or less than 1
11. A particle is moving in a circular path of radius r . The displacement after half a circle would be:
 - (a) Zero
 - (b) πr
 - (c) $2r$
 - (d) $2\pi r$