CBSE

MOTION IN A PLANE WS 4

Class 11 - Physics

1. Multiplying a vector $\vec{v}$ by a negative real number λ **[1]**

   a) gives a vector $\overrightarrow{v'} = \lambda\vec{v}$ in a direction opposite to $\vec{v}$

   b) gives a vector $\overrightarrow{v'} = \lambda\vec{v}$ in the same direction as $\vec{v}$

   c) gives a scalar that is λ times the magnitude of $\vec{v}$

   d) gives a scalar that is λ times the polar angle of $\vec{v}$

2. Multiplying a vector $\vec{v}$ by a positive real number λ **[1]**

   a) gives a vector $\overrightarrow{v'} = \lambda\vec{v}$ in a direction opposite to $\vec{v}$

   b) gives a scalar that is λ times the polar angle of $\vec{v}$

   c) gives a scalar that is λ times the magnitude of $\vec{v}$

   d) gives a vector $\overrightarrow{v'} = \lambda\vec{v}$ in the same direction as $\vec{v}$

3. **Assertion (A):** Multiplying any vector by any scalar is a meaningful operations. **[1]**
   Reason (R): In uniform motion speed remains constant.

   a) Both A and R are true and R is the correct explanation of A.

   b) Both A and R are true but R is not the correct explanation of A.

   c) A is true but R is false.

   d) A is false but R is true.

4. **Assertion (A):** The division of a vector by another vector is not defined. **[1]**
   Reason (R): The division of a vector by a direction is not possible.

   a) Both A and R are true and R is the correct explanation of A.

   b) Both A and R are true but R is not the correct explanation of A.

   c) A is true but R is false.

   d) A is false but R is true.

5. Can a vector be multiplied by both dimensional and non-dimensional scalars? **[1]**