

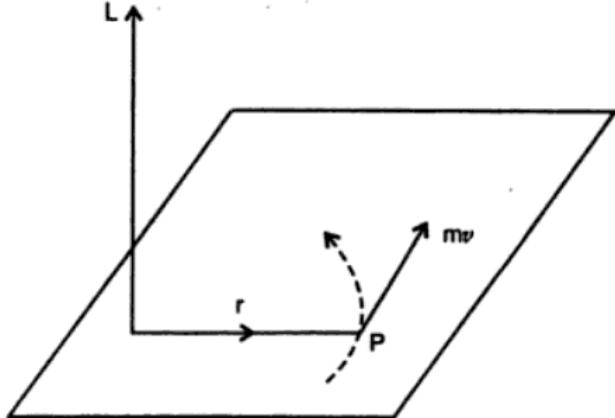
Question #51350, Physics, Mechanics | Kinematics | Dynamics

Problem. Show that the angular momentum $\mathbf{L} = \mathbf{r} \times \mathbf{p}$ vector is an axial vector.

Solution. The equation $\vec{L} = \vec{r} \times \vec{p}$ could be rewritten, as

$$\vec{L} = \vec{r} \times (m\vec{v}).$$

The above relation shows that the angular momentum is a vector directed perpendicular to the plane containing \vec{r} and \vec{v} and its sense is given by right-hand rule (see fig.).



Therefore the angular vector is an axial vector.