

Remember

$$\textcircled{1} \vec{\tau} = \vec{r} \times \vec{F}$$

$\textcircled{2}$ $\vec{\tau}$ is always \perp^{rd} to \vec{r} and \vec{F} .

$$\textcircled{3} \vec{L} = \vec{r} \times \vec{p}, \quad \vec{p} = m\vec{v}$$

$$\star \textcircled{4} \frac{d\vec{L}}{dt} = \vec{r} \times \vec{F} = \vec{\tau}$$

Similar to, $\frac{d\vec{p}}{dt} = \vec{F}$

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$\textcircled{5}$ Angular momentum of a particle moving with constant velocity is always constant w.r.t any fixed point in space.

$\textcircled{6}$ In statement based Q, don't forget that both τ & L have direction.