

10 A body of mass m moves in uniform circular motion with radius r , linear speed v and angular speed ω .

Which change does **not** affect the value of the centripetal force on the body?

A Mass of body is decreased to $\frac{m}{2}$.

B Radius is increased to $2r$ and angular speed is decreased to $\frac{\omega}{2}$.

C Radius is decreased to $\frac{r}{2}$ and linear speed is decreased to $\frac{v}{2}$.

D Linear speed is decreased to $\frac{v}{2}$, angular speed is increased to 2ω and radius is decreased to $\frac{r}{4}$.