

QUES 02:-

- Two cars of masses m_1 and m_2 are moving in circles of radii r_1 and r_2 , respectively. Their speeds are such that they make complete circles in the same time t . The ratio of their centripetal acceleration is :-

[AIEEE - 2012]

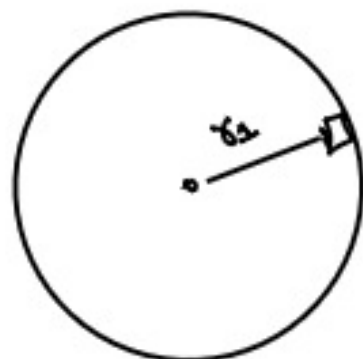
(1) 1 : 1

(2) $m_1 r_1 : m_2 r_2$

(3) $m_1 : m_2$

(4) $r_1 : r_2$

Soln: \Rightarrow



Centripetal acceleration = $\omega^2 r$

Both have same ω so $\frac{a_1}{a_2} = \frac{\omega^2 r_1}{\omega^2 r_2} = \frac{r_1}{r_2}$