

Problem 3



sys = car at B



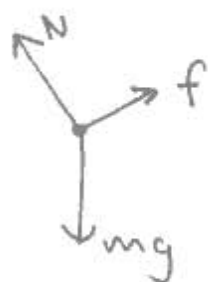
const speed in horizontal dir
 $\Rightarrow$ no friction

Car just makes it $\Rightarrow N=0$

$$\Rightarrow a_{in} = g = \frac{v^2}{R} \Rightarrow \boxed{v = \sqrt{gR}} \leftarrow \begin{array}{l} \text{max speed} \\ \text{at B to} \\ \text{just make it} \end{array}$$

sys = car at A

(just after starting circle)



friction needed to
 keep $v = \text{const}$

