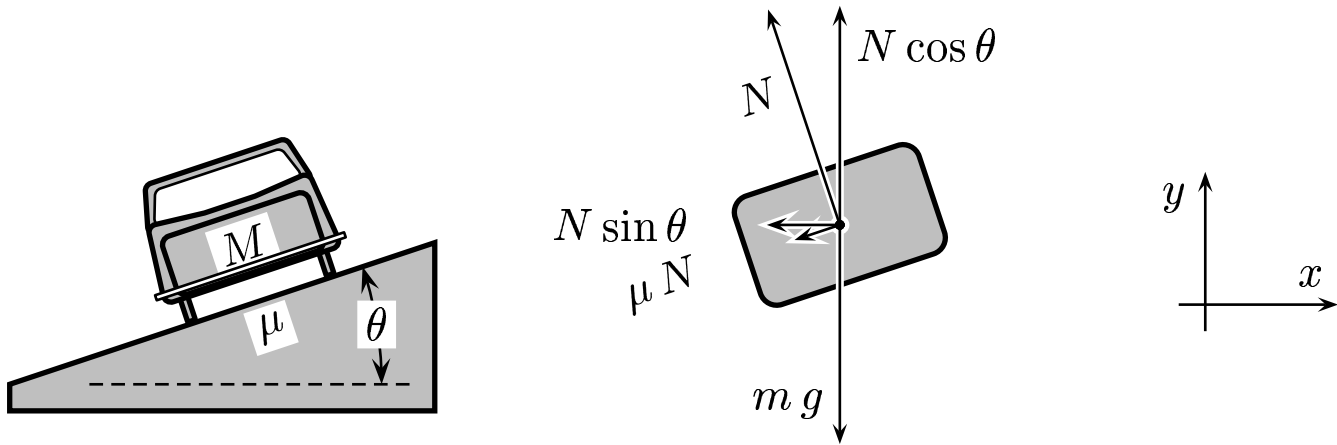


A car rounds a slippery curve. There is a frictional force between the tire and the road which is pointing down the slope.



Compare the speed of the car  $v$ , and the optimal speed for the banked speed for the banked curve  $v_{optimal}$ .

- A)  $v > v_{optimal}$ .
- B)  $v = v_{optimal}$ .
- C)  $v < v_{optimal}$ .

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Since the friction force is pointing downhill, this friction must be due to the car “wanting” to skid outward. The latter is caused by the fact that the speed of the car is greater than the optimal; *i.e.*.

Answer **A**.