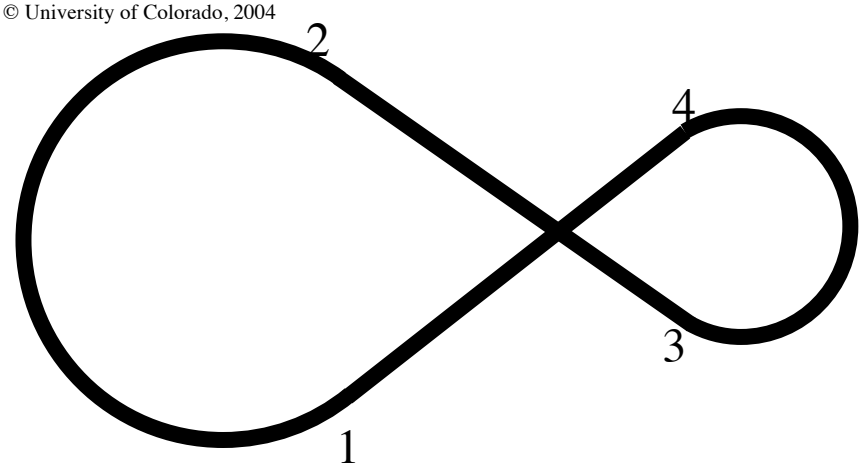


4-13: A race car travels around the track shown at constant speed. Over which portion of the track is the magnitude of the acceleration the largest?

A) From 1 to 2 B) From 3 to 4
C) Neither of these D) Both of these

the smallest?

Q3.11

You drive a race car around a circular track of radius 100 m at a constant speed of 100 km/h. If you then drive the same car around a different circular track of radius 200 m at a constant speed of 200 km/h, your acceleration will be

A. 8 times greater.

B. 4 times greater.

C. twice as great.

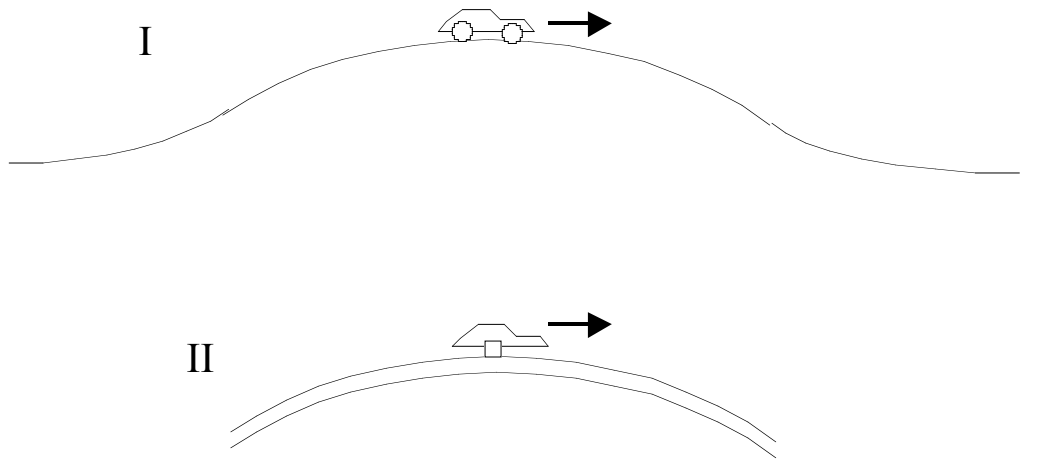
D. the same.

E. half as great.

4-11: Consider the following two situations:

Situation I: A car on Earth rides over the top of a round hill, with radius of curvature = 100 m,
at constant speed v = 35 mph.

Situation II: A monorail car in intergalactic space (no gravity) moves along a round monorail, with radius of curvature = 100 m, at constant speed v = 35 mph.



Which car experiences the larger acceleration?

A: Earth car

B: Space car

C: Both cars have the same acceleration.