II. Acceleration for car moving at constant speed around the oval

5. For the car moving at constant speed, what is the angle between velocity and acceleration?

B. Parts of two ovals are shown below and a car travels around the two paths with the same constant speed. The distance and time interval between the points is the same for both. Make a sketch of the change in velocity in the two cases. Is it the same, or is it larger in one case, and if so which? What does this say about the magnitude of the accelerations? Make a clear statement.

C. A car moves at constant speed around the track below. Draw the acceleration vectors at the points where there are dots. Use long vectors when the acceleration is large, short vectors when it is small, and $a = 0$ if there is no acceleration.

III Acceleration for a car increasing speed

2. When the car is speeding up, is the angle between acceleration and velocity less than, equal to, or greater than 90°?

B. At the points marked draw the velocity vector (- - - >) and the acceleration vector (===>) for the car. On the left the car is moving at constant speed, on the right it is speeding up starting from rest (A). Make lengths of vectors consistent with magnitudes.