Module 02-Lesson 3
Speed and Velocity

Question 1: A runner completes one lap of a circular track of radius of 20.0 m in 62.0 s. Find her average speed and average velocity on that lap?

Question 2: A car moving initially at 80 km/h starts to slow down at a constant rate while at a distance of 30 m from a stop sign. If the car comes to a full stop exactly in front of the stop sign, what is the magnitude of its acceleration?

Problem: After 30 min of running, at the 9-km mark in a 10-km race, you find yourself 100 m behind the front runner and moving at the same speed. What should your acceleration be if you are to catch up exactly at the finish line? Assume that the front runner runs at a constant speed.