

## Distance-Time Graphing Questions

1. a) How is average speed different from instantaneous speed?  
b) When would they be the same?
2. What interpretation can be made about a moving car if the line on a distance–time graph for the car has the following characteristics?
  - a) a high or steep slope
  - b) a low or less steep slope
  - c) a zero slope
3. A car and a truck travel along the same highway with the car moving faster than the truck.
  - a) How do their distances travelled compare after the same length of time?
  - b) How do their times compare after travelling the same distance?
4. A car leaves Borden-Carleton, PEI, on its way across the Confederation Bridge into New Brunswick. The distances and times from the toll booth in PEI are recorded in Table 1. They include a short stretch of road beyond the end of the 12.9-km bridge.
  - a) Plot a distance–time graph. Draw a line of best fit.
  - b) Using your graph, find the distance travelled after 5.0 min.
  - c) Using your graph, find the time required to cross the bridge.
  - d) Was the speed constant during the car’s trip across the Confederation Bridge? How do you know?
  - e) Calculate the slope of the graph. What does this slope represent?
  - f) What was the speed of the car in km/h?

Time (min)	Distance (km)
0.0	0.0
2.0	2.4
4.0	4.8
6.0	7.2
8.0	9.6
10.0	12.0
12.0	14.4