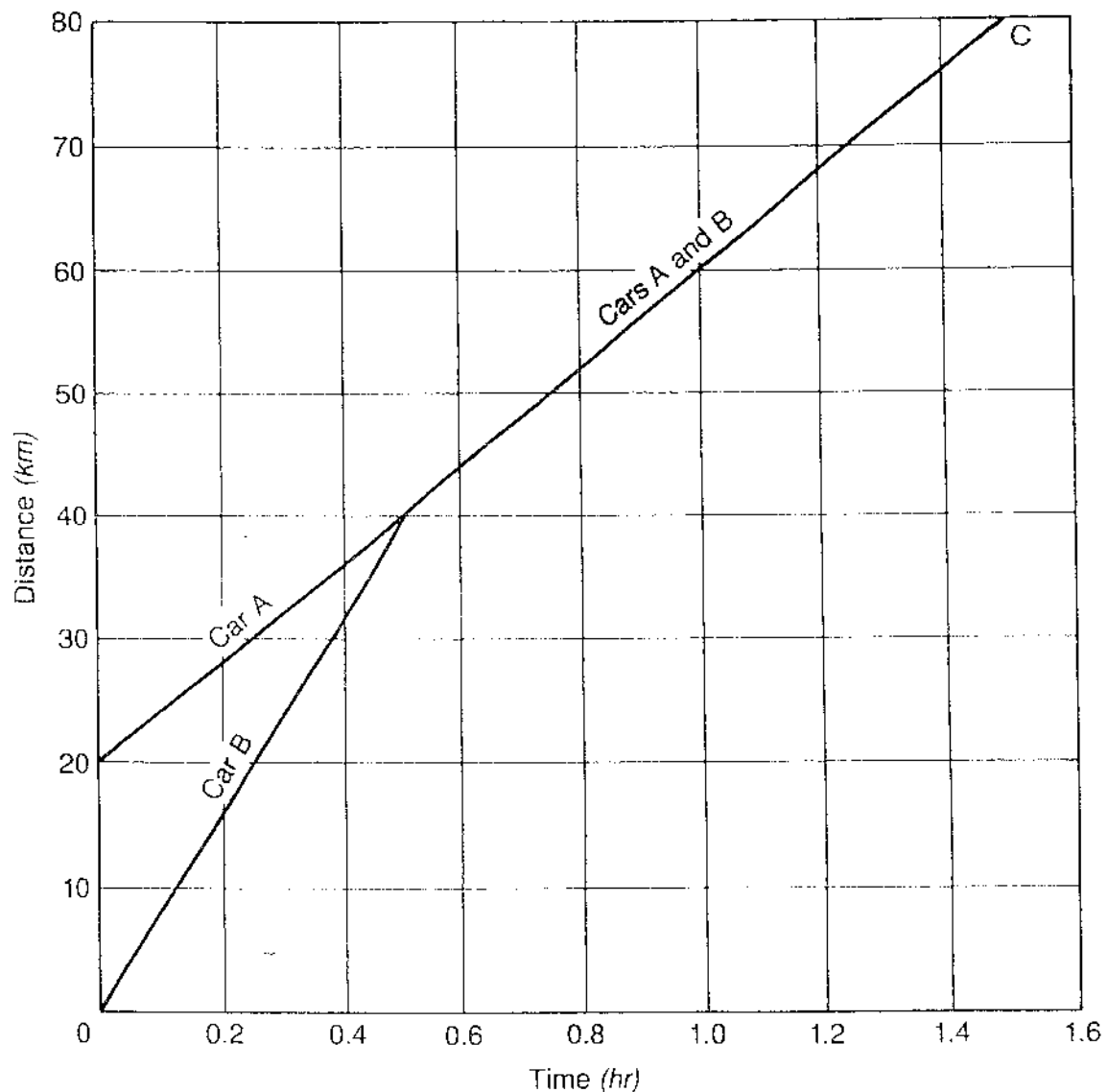


A Speedy Journey

Use the graph below to answer the questions about the journeys of two cars.



- How far did car A travel before it met car B? _____
- How long had the two cars been traveling before they met? _____
- How far did both cars travel at the same speed? _____
- How long did it take both cars to get to point C? _____
- Which car had constant speed? _____ What was its speed? _____
- What were the speeds of the other car? _____

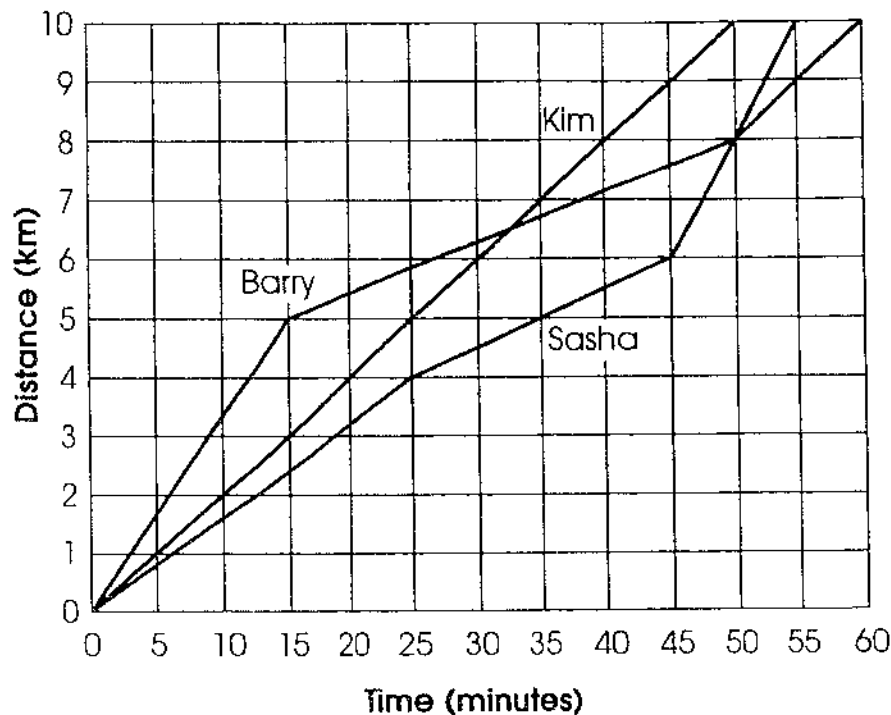
Chapter 3

Use with Text Pages 64–71

REINFORCEMENT

● Motion and Speed

Sasha, Kim, and Barry decided to have a 10-km bicycle race after school. They asked the coach to show them how far 10 km was on the school track. They then had their race on the track. Their race results are shown on the time-distance graph below. Use this graph to fill in the table of race results, calculate average speeds, and answer the questions.



Race Results			
Cyclist	Total distance	Total time	Average speed
Kim			
Sasha			
Barry			

- Which cyclist kept a constant speed during the entire race? What was this speed? _____
- Which cyclist won the race? What was the winning time? _____
- Which cyclist placed second in the race? What was second place time? _____
- Which cyclist placed last? What was last place time? _____
- Which cyclist started off fastest? _____

Chapter 3

Use with Text Pages 72-75

REINFORCEMENT

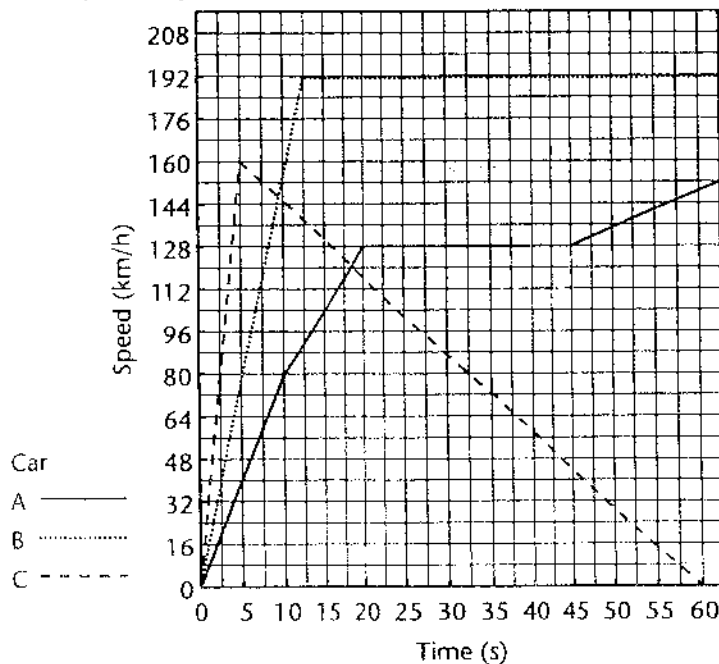
● Velocity and Acceleration

The Car Race

The graph below represents three cars during the first minute of a race. Using the following information, draw another curve on the grid representing the motion of Car D.

Car D accelerates from a rest position at 0 seconds to a speed of 208 km/h at 5 seconds and maintains this speed for 5 seconds. The car decelerates to 32 km/h at 20 seconds. It then accelerates to a speed of 160 km/h at 30 seconds and maintains this speed for 5 seconds. Car D then decelerates to 112 km/h at 40 seconds, decelerates to 64 km/h at 50 seconds, and accelerates to 208 km/h at 55 seconds.

Use your graph to answer the following questions. Write your answers on the lines provided.



- Over which time period is Car B's acceleration the greatest? _____
- What is Car B's speed at 10 seconds? _____
- When is Car B's acceleration equal to zero? _____
- When is Car C's acceleration equal to zero? _____
- Which car(s) have a negative acceleration during the race? _____
- Which car has traveled the farthest at the end of one minute? _____

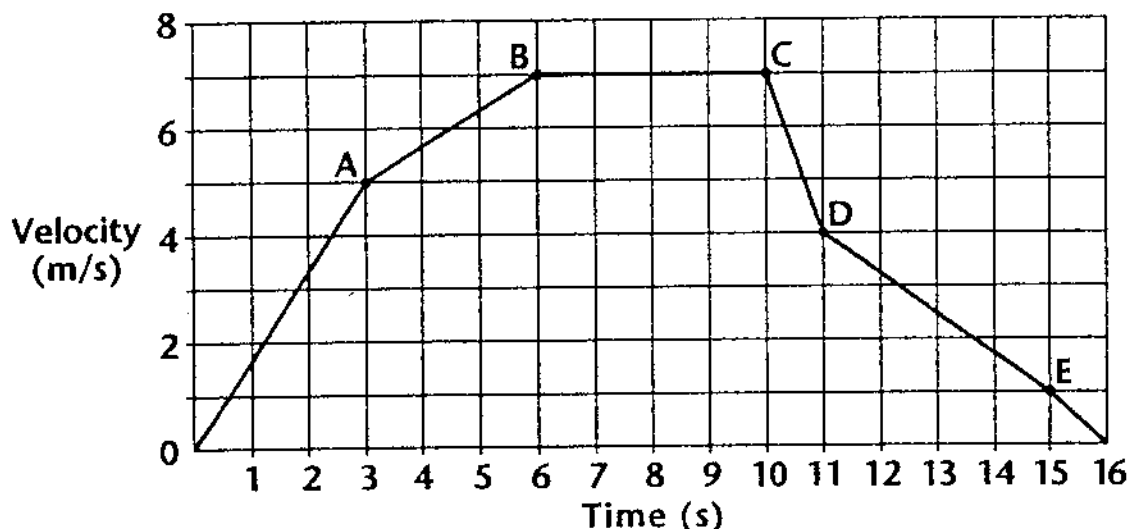
- Which car may have had a reckless driver? Explain. _____

- Which car appears to have stalled? Explain. _____

● Velocity and Acceleration

Interpreting Velocity and Acceleration Graphs

A car traveled through city traffic during rush hour. There was a lot of starting and stopping. The graph below shows its motion for a 16-second interval.



1. Calculate the acceleration between each lettered interval. Remember the measurement of acceleration can be negative.

AB

BC

CD

DE

2. Describe with words what happened to the car during each lettered interval.

AB _____

BC _____

CD _____

DE _____