

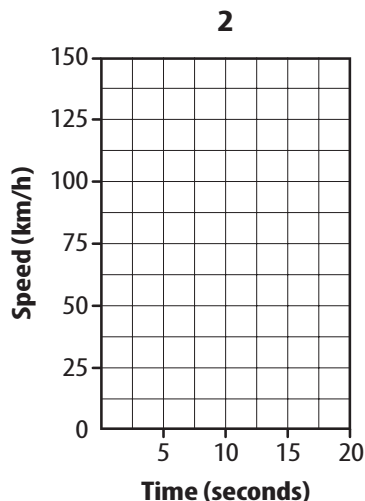
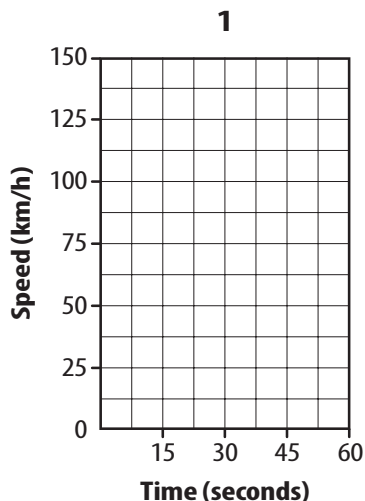
Key Concept Builder 

LESSON 3

Acceleration

Key Concept What does a speed-time graph indicate about an object’s motion?

Directions: On the speed-time graph below, plot the speeds of three cars, as indicated. Label the lines you draw on your graphs car A, car B, and car C.



1. During a period of 60 seconds, car A travels at a speed of 125 km/h for 15 seconds and then slows to 100 km/h; car B travels at a speed of 75 km/h for 30 seconds and then increases to 125 km/h; car C travels at a constant speed of 50 km/h.

2. During a period of 20 seconds, car A slows at a constant rate from a speed of 100 km/h to a complete stop; car B travels at a constant speed of 50 km/h; and car C accelerates at a constant rate from a standstill to 100 km/h.

Directions: Answer each question on the lines provided.

3. If a speed-time graph showing the motion of two cars contains two parallel horizontal lines, which line represents the faster car?

4. What does it mean if those two lines bend toward each other and meet at a point on the right side of the graph?

5. What is the limitation of speed-time graphs?
