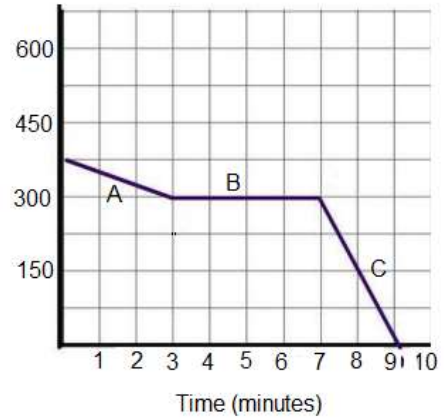


**Graphing Stories Practice**

1) An Airplane is descending to land at the airport. During its descent it had to fly in circles until the landing was cleared of other planes.

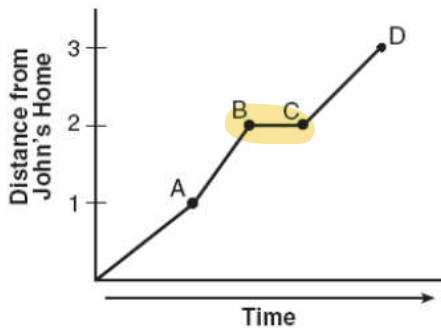
Explain what is occurring during each of the segments. Is the graph increasing, decreasing, or constant? What is the speed of the airplane during that period of time?



$\frac{y}{x}$  feet  
min.

| Line Segment | Increasing<br>Decreasing<br>Constant? | Rate of Change                    | Describe what is happening                                     |
|--------------|---------------------------------------|-----------------------------------|--|
| A            | DECREASING                            | $-\frac{75}{3} = -\frac{25}{1}$   | The plane is descending at 25 ft/min                           |
| B            | Constant                              | $\frac{0}{4} = 0$                 | The plane stays at a constant height (does not ascend/descend) |
| C            | DECREASING                            | $-\frac{300}{2} = -\frac{150}{1}$ | The plane is descending at 150 ft/min                          |

2) John left his home and walked 3 blocks to his school, as shown in the accompanying graph.



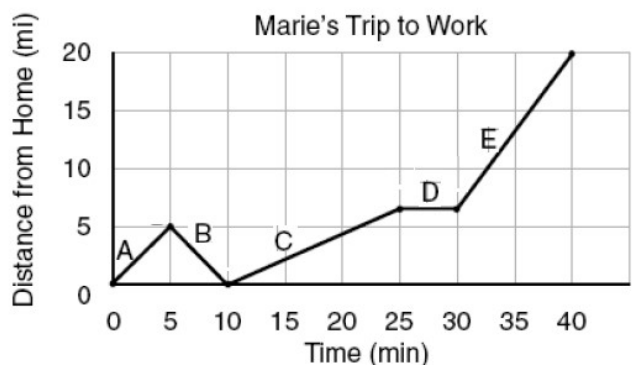
What is one possible interpretation of the section of the graph from Point B to Point C?

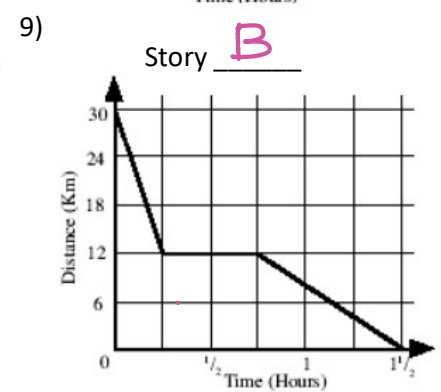
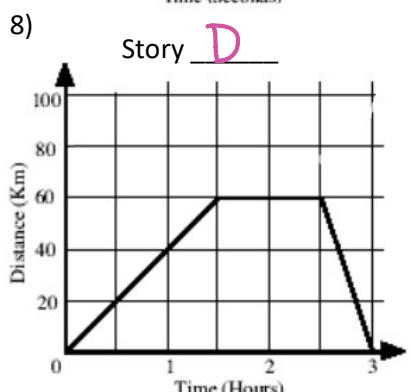
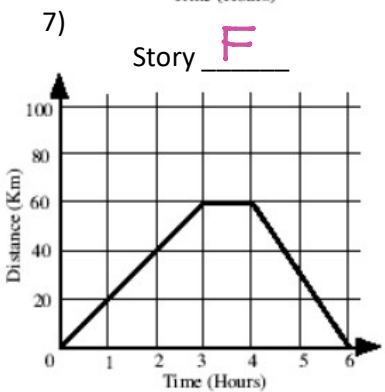
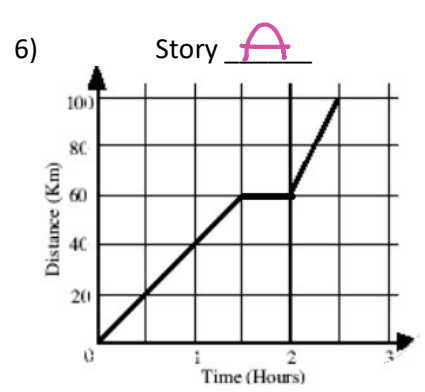
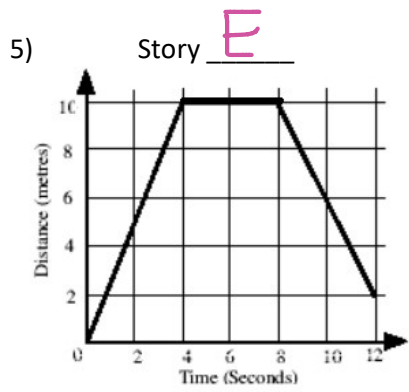
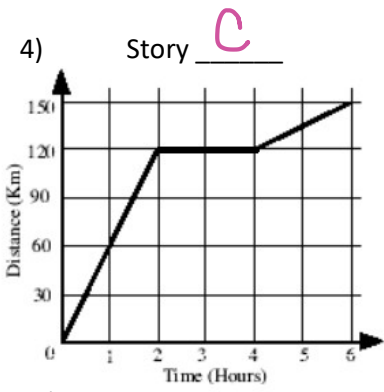
- (a) John arrived at school and stayed throughout the day.
- (b) John waited before crossing a busy street.
- (c) John returned home to get his mathematics homework.
- (d) John reached the top of a hill and began walking on level ground.

3) Marie left her briefcase at home and had to return to get it. Which segment shows her returning to home? B

Which segment did she walk at the fastest rate? E  
How do you know?

Marie also had to wait at the railroad tracks for a train to pass. How long did she wait? 5 minutes





Match the story to the graph.

|  |   |  |
|--|---|--|
| <p>A.<br/>A coach <b>leaves the station at 10am</b> and reaches Gloucester station at <b>11.30am</b>. It <b>stops</b> here for <b>half an hour</b>. It then carries on for <b>30 minutes</b> reaching Worcester 40 km later.</p> | <p>B.<br/>A cyclist rides downhill towards home for <b>15 minutes</b>. At the bottom of the hill she <b>stops</b> for <b>half an hour</b> for a drink. She then <b>continues</b> uphill for the remaining <b>12 km</b>.</p> | <p>C.<br/>A car travels at a constant speed for <b>2 hours</b> on the motorway. It <b>stops</b> at the service station for <b>two hours</b>, then travels in heavy traffic at for <b>30 km</b></p> |
| <p>D.<br/>A bus leaves school at <b>9am</b> and gets to its destination at <b>10.30am</b>. The children look around the museum for <b>an hour</b> then <b>return back</b> to school. The bus arrives back at <b>midday</b>.</p>  | <p>E.<br/>A toddler rides his bike toward the neighbor's house 10 meters away. He stops in their driveway to turn around then he rides back home. 2m from home, he hits a bump and falls off his bike.</p>                  | <p>F.<br/>A man drives to his friend's house who lives <b>60 km</b> away, <b>stops</b> for <b>an hour</b> then <b>returns home</b> in <b>2 hours</b>.</p>  |

10) What was Jon's speed between 50 and 70 seconds?  
 $\frac{\text{meters}}{\text{sec}} = \frac{60}{20} = \frac{-3}{1}$  Jon walked 3 meters/sec. towards his house

What was Jon's speed between 100 and 120 seconds?  
 0 meters/sec.

How far from home was Jon after 30 seconds?  
 60 meters

