

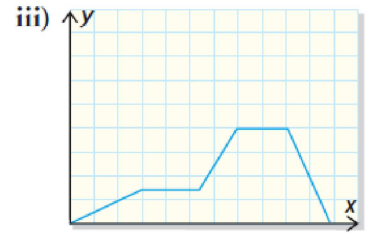
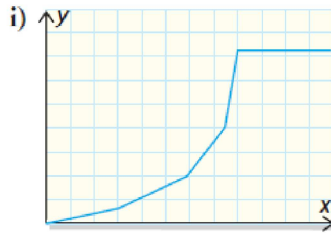
5.1 Distance Time Graphs

Math 10

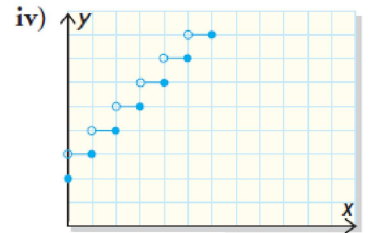
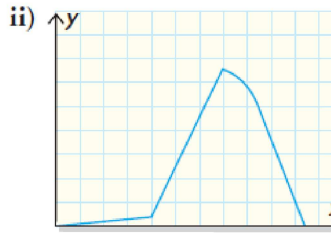
Distance-Time Graphs

1. Match each story to the graph that best describes the story.

iii a) Michael walks to school at a steady pace. He waits once for a stop light and continues to school at a faster pace. After being at school, he returns home without stopping or slowing down.



i b) A log floating in a slow, steadily moving river goes through two sets of rapids before going over a waterfall into a lake.



iv c) A taxi driver charges a passenger to get in the cab plus a fixed amount for every 100 m.

ii d) Mya enters a plane that takes off and climbs at a steady rate. She jumps out and free-falls until the parachute opens. She descends the rest of the way at a constant speed.

2. This graph shows how an all terrain vehicle travels over time.

a) Over what interval of time is the ATV travelling the slowest?

8 - 16 s

b) Over what interval of time is the ATV travelling the fastest?

26 - 32 s

c) When does the ATV begin to return to its starting point?

26 s

d) When does the ATV get back to its starting point?

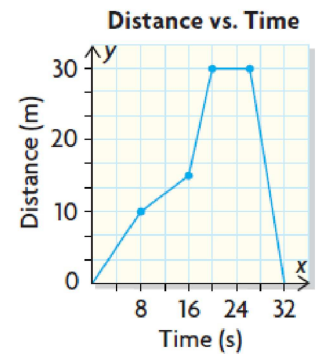
32 s

e) Determine the slope of the graph between 20 s and 26 s.

0

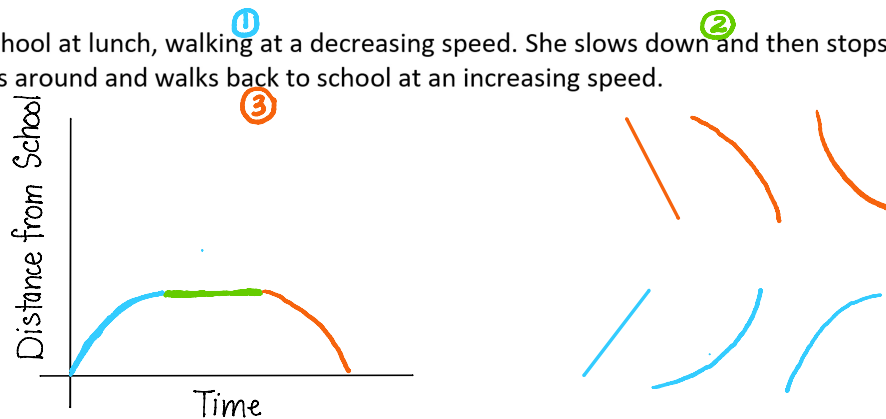
f) What does a zero slope mean in the context of this graph?

The ATV is not moving.

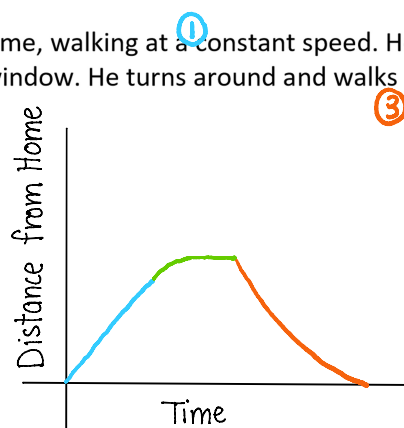


3. Draw a distance-time graph for each situation.

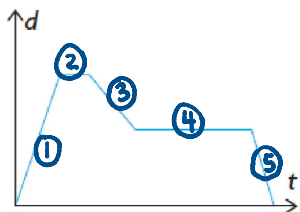
a) Eva leaves school at lunch, walking at a decreasing speed. She slows down and then stops to talk to a friend. She turns around and walks back to school at an increasing speed.



b) Bill leaves home, walking at a constant speed. He slows down and then stops for a few seconds to look in a store window. He turns around and walks back home at a decreasing speed.



4. Describe a situation that could match this graph.



- ① walking away from something at a constant rate
- ② + ④ stopped
- ③ + ⑤ moving toward object at a constant rate