NOTES:

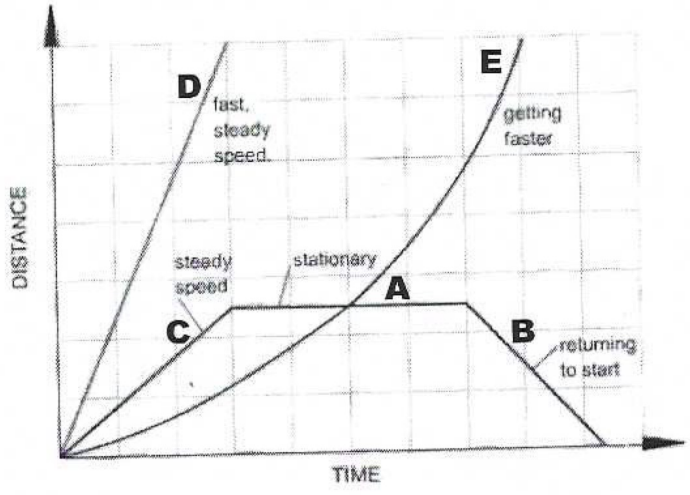
Interpreting Graphs
Distance-Time Graphs

Created for you by Ms. Nhotsoubanh

- **Motion** is a change in position measured by distance and time.
- **Speed** tells us the rate at which an object moves.
- **Velocity** tells the speed and direction of a moving object.
- **Acceleration** tells us the rate speed or direction changes.

A **Distance-Time Graph** tells us how far an object has moved with time.

- The steeper the graph, the faster the motion.
- A horizontal line means the object is not changing its position - it is not moving, it is at rest. (Line A on graph)
- A downward sloping line means the object is returning to the start. (Line B on graph)
- If an object is moving at a constant speed, it means it has the same increase in distance in a given time. Constant speed is shown by straight lines on a graph. (Line C on graph)
- A steeper line indicates a larger distance moved in a given time. In other words, higher speed. (Line D on graph)
- If the line in a graph is curving upwards, this shows an increase in speed. (Line E on graph)



Name: _____

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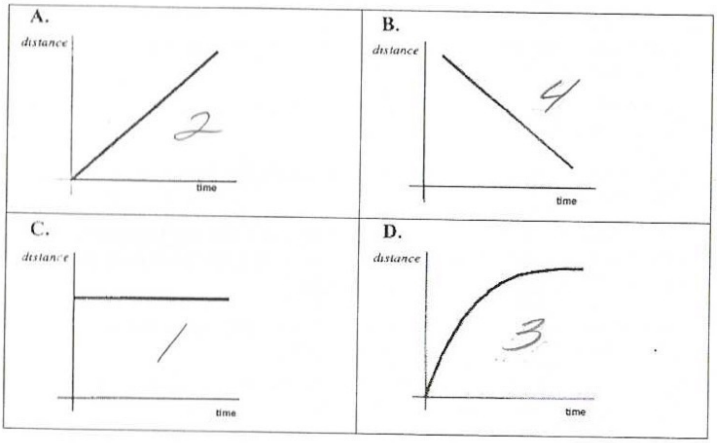
Glue on page 36

The distance-time graphs below represent the motion of a car. Match the descriptions with the graphs. Explain your answers.

Descriptions:

1. The car is stopped.
2. The car is traveling at a constant speed.
3. The speed of the car is decreasing.
4. The car is coming back.



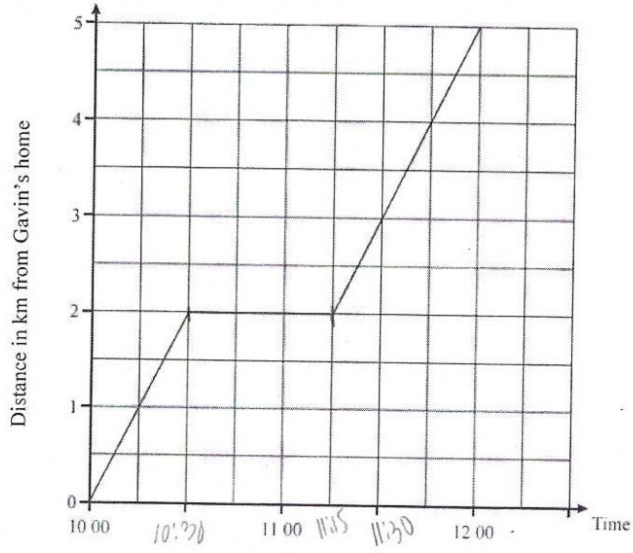
Graph A matches description 2 because the slope is increasing at a constant rate

Graph B matches description 4 because the line has a downward slope.

Graph C matches description 1 because a horizontal line means at rest or stationary

Graph D matches description 3 because a slight downward curve means decrease in speed

Gavin left home at 10:00 am. He walked to the swimming pool. On the way to the swimming pool he stopped to talk to a friend. Here is the distance-time graph for his complete journey.



(a) For how many minutes did Gavin stop and talk to his friend?

45 minutes

(b) What is the distance from Gavin's home to the swimming pool?

5 km