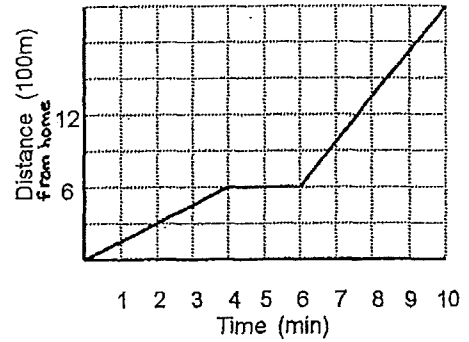# 5.3 : INTERPRETING GRAPHICAL MODELS _____

EXAMPLE 1:

This graph shows the relationship between distance and time for a cyclist going from school to the local arena. Distance is being measured from the cyclist's point of departure, the school.
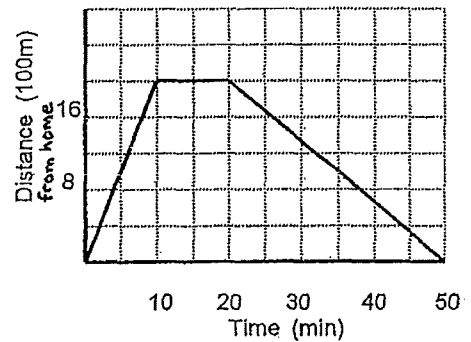
a) Complete the following chart:

Time (min.)	Change in Distance	Interpretation
0 - 4		
4 - 6		
6 - 10		

b) Write a story to match the graph.

EXAMPLE 2:

This graph shows the relationship between distance and time for a student leaving the house and going for a walk.

a) Complete the following chart.

Time (min.)	Change in Distance	Interpretation
0 - 10		
10 - 20		
20 - 50		

b) Write a story that would illustrate this distance – time graph.

EXAMPLE 3:

George lives 400 m from a video store. He walks to the store but along the way he stops for 2 min to watch a baseball game in the neighbourhood park.

He continues to walk to the video store, chooses and rents a movie, and then he runs straight home to watch it.
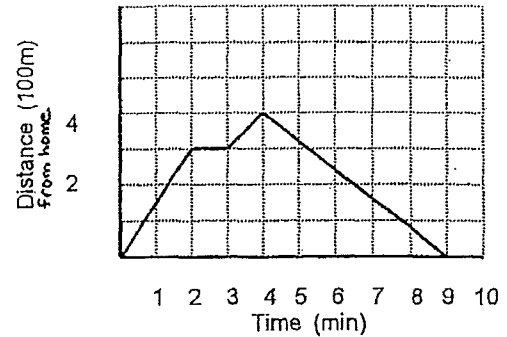
a) Which of these graphs is the better illustration of George's whole trip?

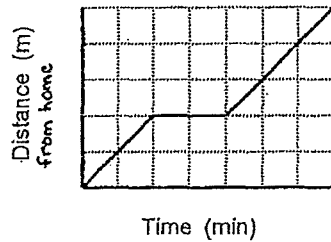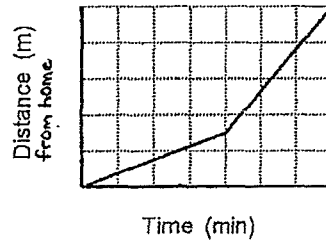b) Rewrite the story of George's trip for the other graph.
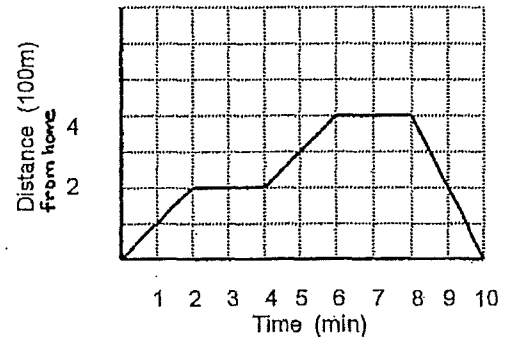
EXAMPLE 4:

Several students live in the same apartment building and ride their bikes to school each morning.

Look at these three graphs and read the two stories.
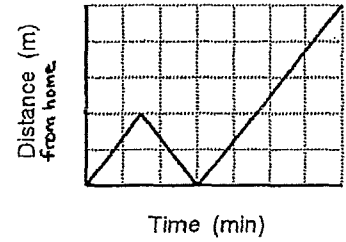
A: B: C:

Ken: I started off to school but remembered that I had left my homework on the table. I rode back home, picked the homework up, then went quickly to school.
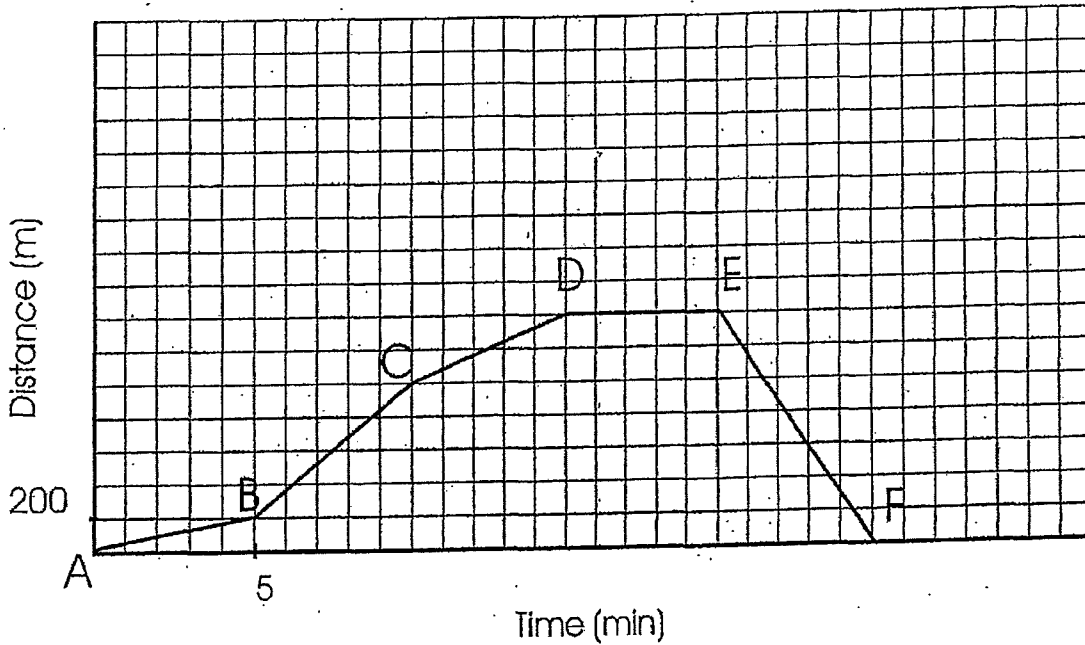
Jim: On the way to school I met Marty. I stopped to talk to him for a few minutes, then rode quickly to school.

a) Which story goes with which graph?

b) Write a story that Rob might have told, if his trip were illustrated on the remaining graph.

5.4.1: A Runner's Run

Chris runs each day as part of his daily exercise. The graph shows his distance from home as he runs his route.


Write a story to describe Chris' run today. Be sure to include the following for EACH segment of the graph:
- direction of the motion during the segment
- distance travelled during the segment
- total time taken for the segment
- speed for the segment
- whether the motion is constant or non-constant during the segment
- a reason/story for each segment

Seatwork: Handouts.

Time-Distance Graphs

Date:

Study each graph and answer the questions in your notes using <u>complete sentences</u>.

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1. Max's Journey Home From School

Distance from
school (m)

B

C

D

A

Time (min)
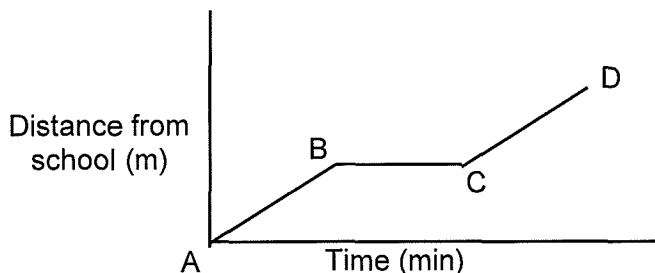
a) The title states that the journey is "home <u>from</u> school". How does the ***graph*** show that the journey is "home from school"?
b) Describe each of the 3 parts of Max's journey. What is he doing in each part?
c) How is the first part of the journey similar to the last part of the journey?

---

2. Christine's Journey Home From School

Distance from
school (m)

B

C

D

A

Time (min)
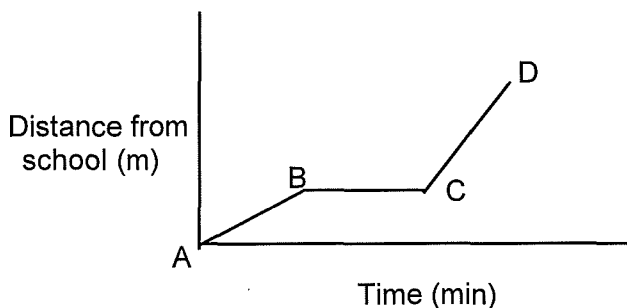
a) Describe each of the 3 parts of Christine's journey.
b) How is the first part of her journey different from the last part of her journey?
c) If the first part of Christine's journey was the same slope as the last part of her journey, how would the total time for the journey be affected?

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3. Max's Jog to the Gym

Distance from
home (m)

B

C

D

A

Time (min)
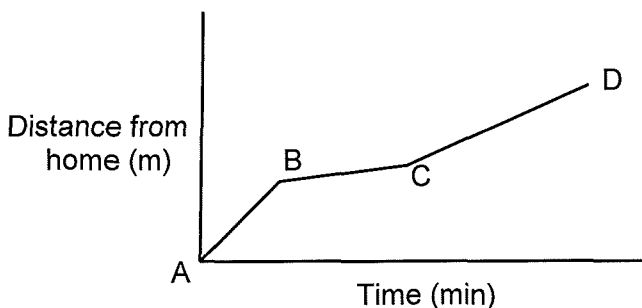
a) Describe each of the 3 parts of Max's journey.
b) Which part of his journey was the fastest? The slowest? How do you know this?

### 4. Christine's Walk to the Corner Store

Distance from home(m)
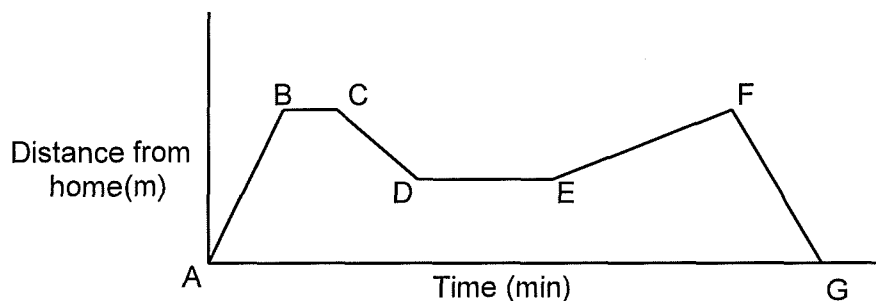
a) What is Christine doing between C and D?
b) Describe, in detail, a story that would explain each part of Christine's journey. Include information on how long different parts took and the speeds at which she walked at various times.

5. Max's Afternoon Drive

Distance from home(m)
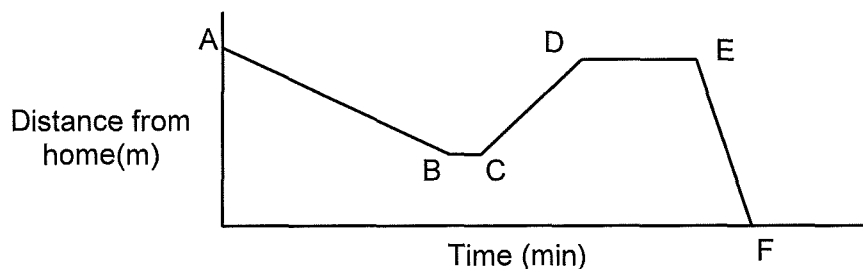
a) How does the graph show that Max did **not** start his drive from home?
b) What is Max doing between C and D?
c) Describe, in detail, a story that would explain the graph.

6. Christine's Drive

Distance from home(m)
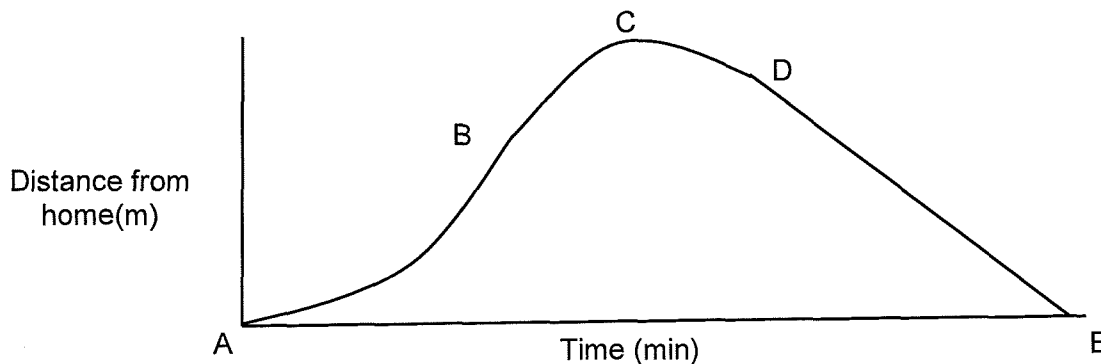
a) How is this graph different from all previous graphs?
b) Describe Christine's speed between A and B.
c) Describe Christine's speed between B and C.
d) Describe Christine's speed at C.
e) Describe Christine's speed between D and E