Journey to the Bus Stop

Every morning Tom walks along a straight road from his home to a bus stop, a distance of 160 meters. The graph shows his journey on one particular day.

Distance from home in meters

Time in seconds

Fig. 1: Sheet of the Activity 1

Activity 1: write a story that corresponds to the graph in Fig. 1.

Activity 2: matching a graph with a story (Fig. 2). Translated in French, the task has been copied and pasted in Maple TA.
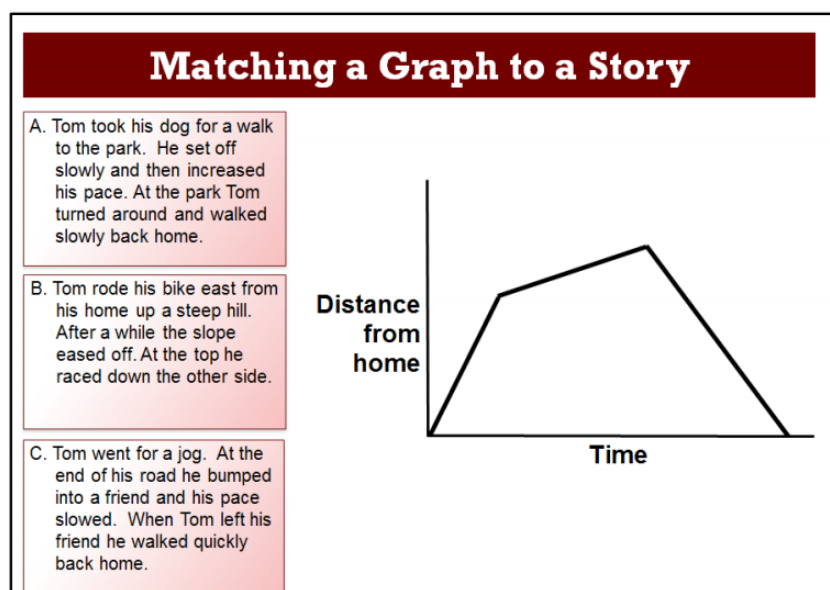
Matching a Graph to a Story

A. Tom took his dog for a walk to the park. He set off slowly and then increased his pace. At the park Tom turned around and walked slowly back home.

B. Tom rode his bike east from his home up a steep hill. After a while the slope eased off. At the top he raced down the other side.

C. Tom went for a jog. At the end of his road he bumped into a friend and his pace slowed. When Tom left his friend he walked quickly back home.

Distance from home
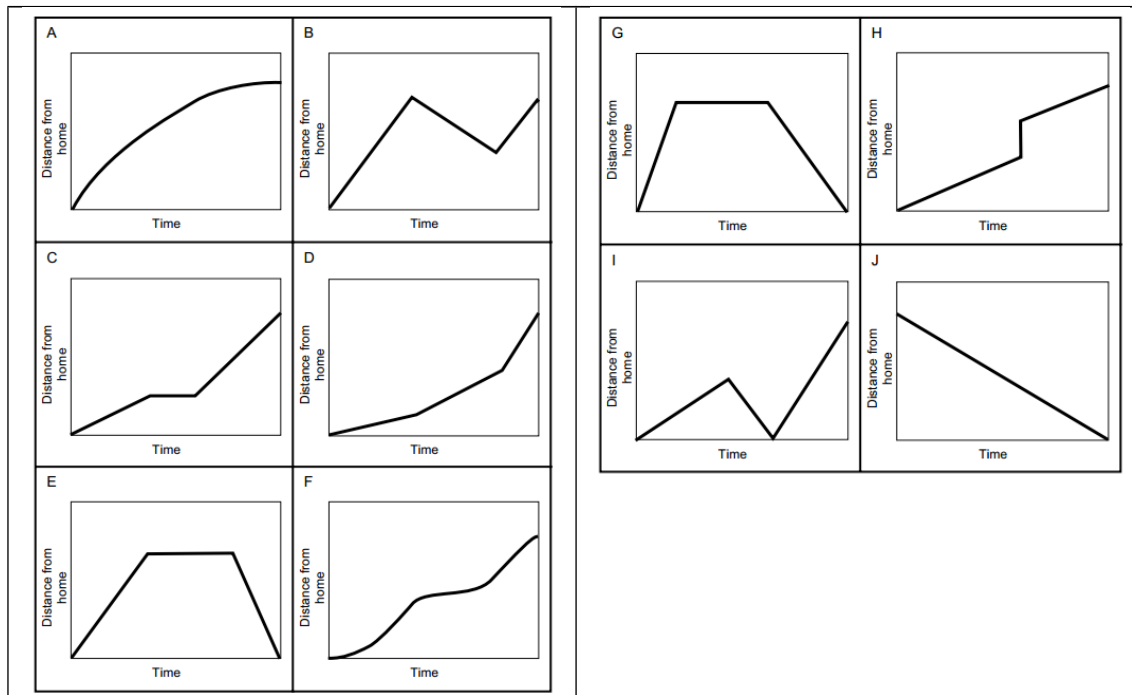
Time

Fig. 2: Question entered in Maple TA

Session 2 (day 2)

Feedback on the classroom's scores regarding the Activity 2 (Fig. 2).

Sharing and discussion about the students' stories concerning the Activity 1 (Fig. 1).

Session 3 (day 2)

Activity 3: Matching ten graphs to ten stories (Fig. 3) on Maple TA.

A	B
Distance from home / Time	Distance from home / Time

C	D
Distance from home / Time	Distance from home / Time

E	F
Distance from home / Time	Distance from home / Time

G	H
Distance from home / Time	Distance from home / Time

I	J
Distance from home / Time	Distance from home / Time

1 Tom ran from his home to the bus stop and waited. He realized that he had missed the bus so he walked home.	**2** Opposite Tom's home is a hill. Tom climbed slowly up the hill, walked across the top, and then ran quickly down the other side.
3 Tom skateboarded from his house, gradually building up speed. He slowed down to avoid some rough ground, but then speeded up again.	**4** Tom walked slowly along the road, stopped to look at his watch, realized he was late, and then started running.
5 Tom left his home for a run, but he was unfit and gradually came to a stop!	**6** Tom walked to the store at the end of his street, bought a newspaper, and then ran all the way back.
7 Tom went out for a walk with some friends. He suddenly realized he had left his wallet behind. He ran home to get it and then had to run to catch up with the others.	**8** This graph is just plain wrong. How can Tom be in two places at once?
9 After the party, Tom walked slowly all the way home.	**10** Make up your own story!

Fig. 3: Activity 3 entered in Maple TA

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Activity 3

On the coordinate plane, two curves represent the growth of a baby: the size (cm) and the weight (g) over time (months).
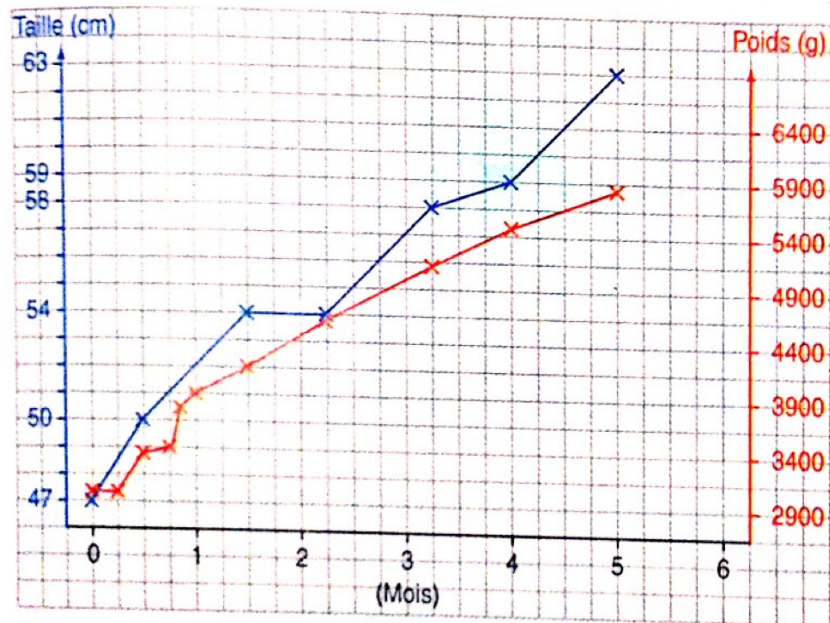
Source : balmana.web.chez.tiscali.fr

a) What does each curve represent? Where are placed the graduations of the size? Where are placed the graduations of the weight?
b) Between which ages have the curves been constructed?
c) Which were the size and the weight of the baby at his birth?
d) At the age of 3 months, what was the size and the weight of the baby?

Activity 4

The followingtable collects the max. and min. temperatures measured every day for 15 days.

Day	Temperature Max °C	Temperature Min °C
1	2.1	-0.9
2	2.3	-0.9
3	1.8	-1.7
4	-0.4	-4.1
5	0.3	-1.2
6	-0.7	-3.8
7	0.2	-8.9
8	1.8	-1.7
9	-0.3	-6.4
10	1.9	-6.3
11	3.6	-6.3
12	5.8	-2.1
13	6	3.1
14	5	3.2
15	3.6	0

1a. In a coordinate plane, place the points that represent the max temperatures, marking the days on the x-axis and the max temperatures on the y-axis.

1b. In the same way, place the points representing the min temperatures.

And they had to answer the following questions:

2. Which were the hottest days? Which were the coldest days?

3. How many times did the temperatures increase for a day to the next one?

4. How many days have the temperature been under 0 °C?