

A FORMATIVE ASSESSMENT LESSON: MATCHING GRAPHS, STORIES AND TABLES

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AIMSSEC

TARGET AUDIENCE: Secondary phase

DURATION: 2 hours

MAXIMUM NUMBER OF PARTICIPANTS: 30

MOTIVATION:

This workshop covers the important idea of formative assessment, which is challenging for many teachers. It is based on a lesson on time and distance graphs, which includes extensive guidance for teachers, and which is written specifically as a 'formative assessment lesson'. Participants will learn about new ways to use formative assessment and will also be exposed to cutting-edge thinking about teaching the specific mathematics topic of time-distance graphs.

DESCRIPTION OF THE CONTENT OF THE WORKSHOP:

- Group discussion on formative assessment (15 minutes)
- Small group work on the task (30 minutes)
- Whole group work on the lesson as written (30 minutes)
- Whole group viewing of video of students working on the task (15 minutes)
- Small group discussion on formative assessment opportunities in the video (20 minutes)
- Wrap up (10 minutes)

Activities and worksheets to be used: Attached.

ABSTRACT:

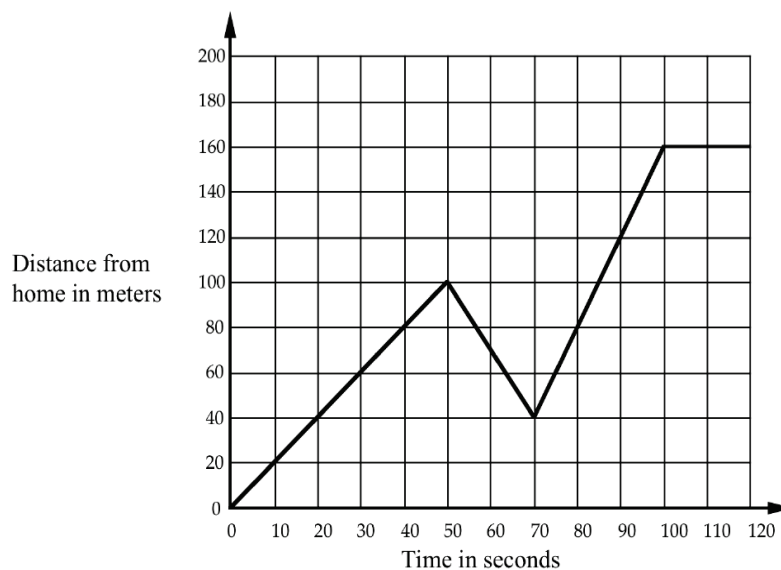
This workshop aims to extend understandings of formative assessment. Participants are introduced to a 'Formative Assessment Lesson' produced by a team at the University of Nottingham, in the UK. The lesson is based around a task in which learners work in groups to match three sets of cards: one with distance-time graphs, one with stories and one with tables of data.

The workshop begins with a short discussion about current understandings of 'formative assessment'. Participants then take the role of learners to complete the task, all the time watching out for opportunities for formative assessment through their own discussions.

To continue, participants take the role of the teacher, as they are introduced to the full ‘lesson’, which includes: extensive guidance for the teacher; a diagnostic pre-lesson task for the students; the task itself; and a post-lesson task. (The full lesson can be found at <http://map.mathshell.org/materials/download.php?fileid=1521>). Key points relating to formative assessment are drawn out from the guidance. Finally video of students (in the UK) working on the task will be shown. Participants will discuss how and when formative assessment is well used.

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.



- Describe what may have happened. You should include details like how fast he walked.

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- Are all sections of the graph realistic? Fully explain your answer.

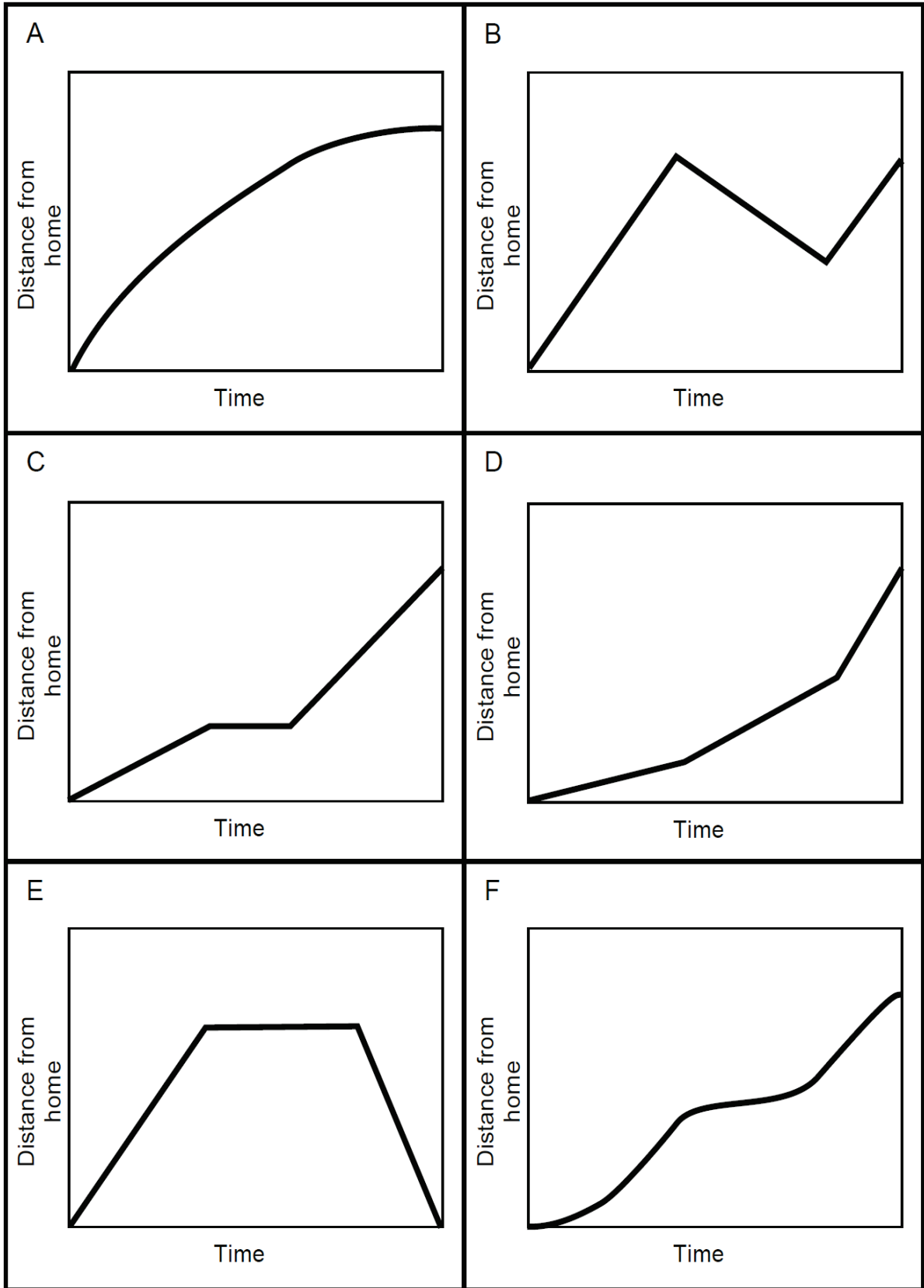
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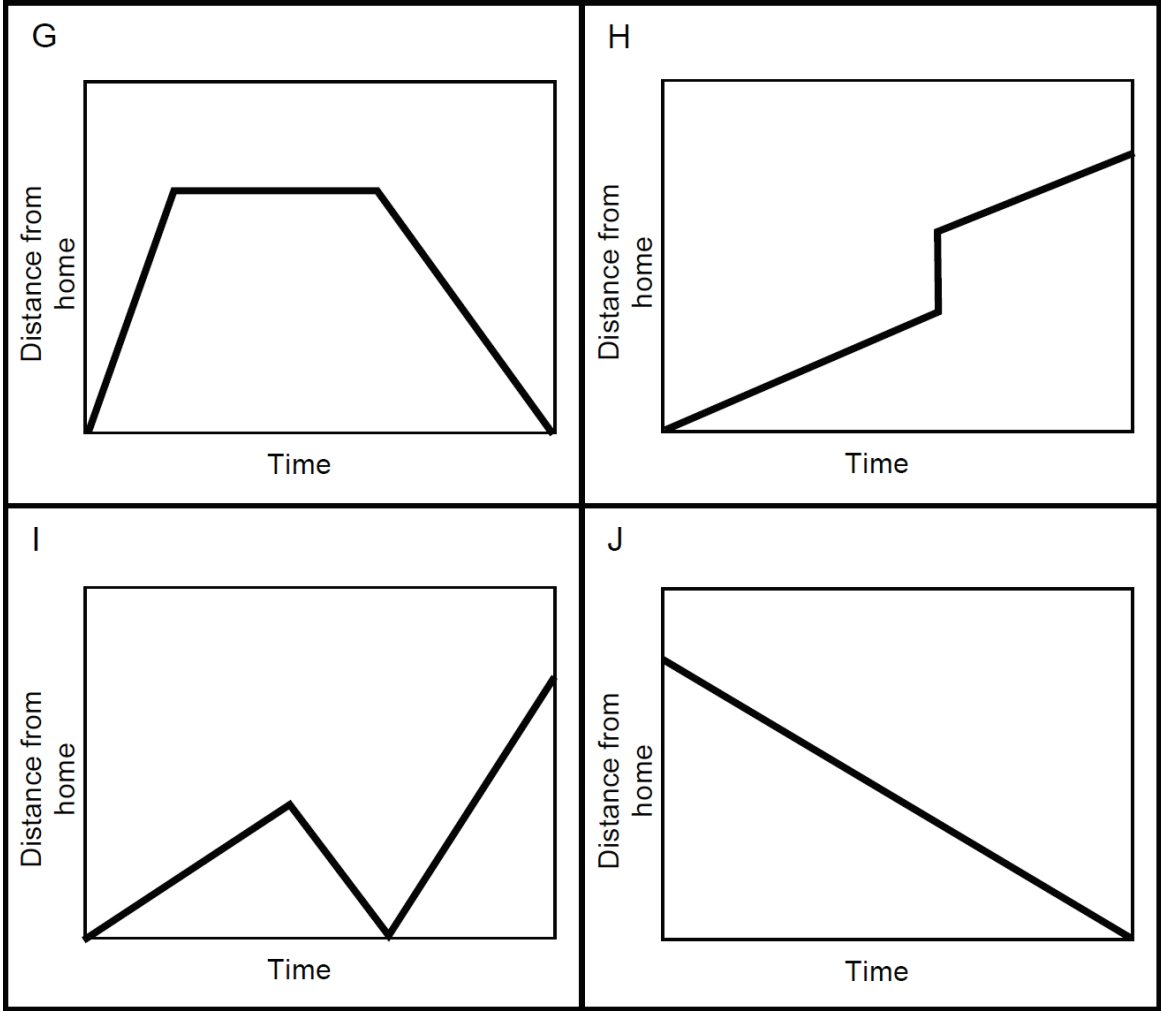
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Card Set A: Distance–Time Graphs



Card Set A: Distance–Time Graphs (continued)



Card Set B: Interpretations

<p>1 Tom ran from his home to the bus stop and waited. He realized that he had missed the bus so he walked home.</p>	<p>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.</p>
<p>3 Tom skateboarded from his house, gradually building up speed. He slowed down to avoid some rough ground, but then speeded up again.</p>	<p>4 Tom walked slowly along the road, stopped to look at his watch, realized he was late, and then started running.</p>
<p>5 Tom left his home for a run, but he was unfit and gradually came to a stop!</p>	<p>6 Tom walked to the store at the end of his street, bought a newspaper, and then ran all the way back.</p>
<p>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.</p>	<p>8 This graph is just plain wrong. How can Tom be in two places at once?</p>
<p>9 After the party, Tom walked slowly all the way home.</p>	<p>10 Make up your own story!</p>

Card Set C: Tables of Data

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