CONCEPT DEVELOPMENT



Mathematics Assessment Project CLASSROOM CHALLENGES A Formative Assessment Lesson

Interpreting Distance-Time Graphs

Mathematics Assessment Resource Service University of Nottingham & UC Berkeley

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Card Set A: Distance–Time Graphs

Student materials

Interpreting Distance-Time Graphs © 2015 MARS, Shell Center, University of Nottingham



Card Set A: Distance–Time Graphs (continued)

Card Set B: Interpretations

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!

Card Set C: Tables of Data

Р	Time	Distance	0	Time	Distance		R	Time	Distance
-	0	0		0	0			0	0
	1	40		1	10			1	18
	2	40		2	20			2	36
	3	40		3	40			3	54
	4	20		4	60			3	84
	5	0		5	120			5	120
S	Time	Distance	т	Time	Distance	1		Time	Distance
5	0	0	•	0	0		0	0	0
	1	40		1	20			1	30
	2	80		2	40			2	60
	3	60		3	40			3	0
	4	40		4	40			4	60
	5	80		5	0			5	120
v	Time	Distance	w	Time	Distance]	Y	Time	Distance
v	0	0	vv	0	0		^	0	120
	1	20		1	45			1	96
	2	40		2	80			2	72
	3	40		3	105			3	48
	4	80		4	120			4	24
	5	120		5	125			5	0
v	Make this	s one up!	7	Make this one up!					
	Time	Distance	~	Time	Distance				
	0			0					
	1			1					
	2			2					
	3			3					
	4			4					
	5			5					
	6			6					
	7			7					
	8			8					
	9			9					
	10			10					

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.



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Making Up Data for a Graph

