

MAT.08.TE.2.0000F.A.148

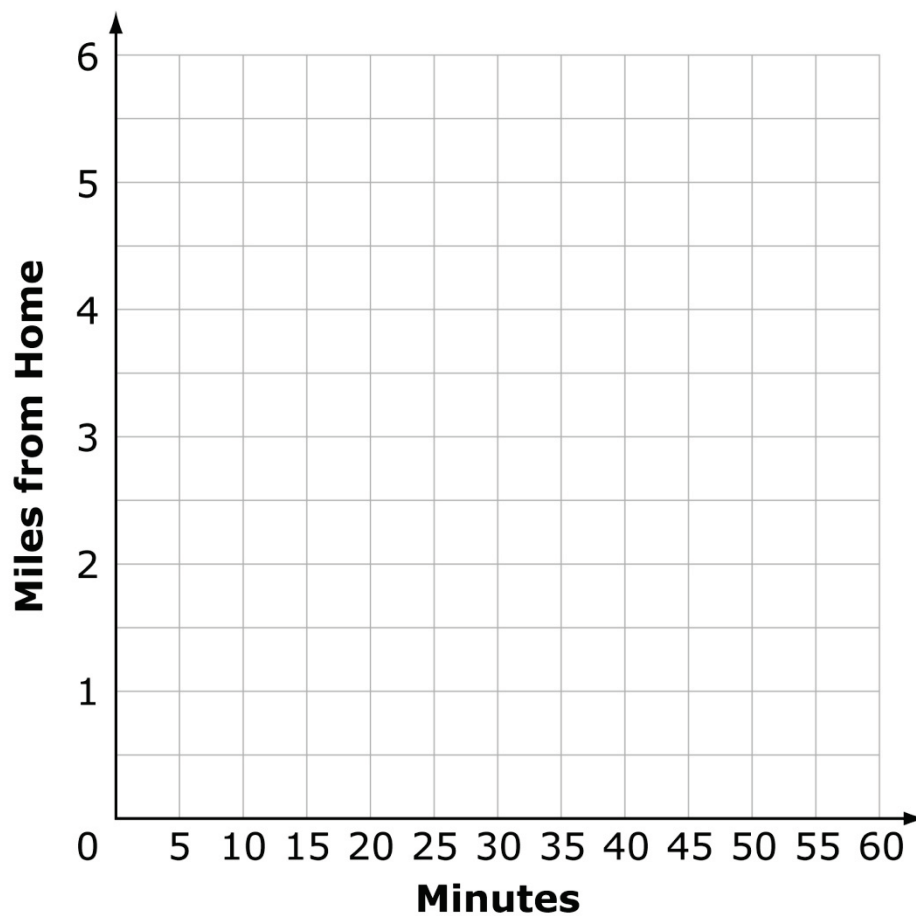
Sample Item ID:	MAT.08.TE.2.0000F.A.148
Grade:	08
Primary Claim:	Claim 2: Problem Solving Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
Secondary Claim(s):	Claim 1: Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.
Primary Content Domain:	Functions
Secondary Content Domain(s):	
Assessment Target(s):	2 A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace. 2 B: Select and use appropriate tools strategically. 1 F: Use functions to model relationships between quantities.
Standard(s):	8.F.5
Mathematical Practice(s):	1, 2, 4
DOK:	2
Item Type:	TE
Score Points:	2
Difficulty:	M
Key:	See Sample Top-Score Response.
Stimulus/Source:	
Target-Specific Attributes (e.g., accessibility issues):	
Notes:	The purpose of this item is to determine if students can sketch a graph that matches the verbal description of a function.

Carla rode her bike to her grandmother's house. The following information describes her trip:

- For the first 5 minutes, Carla rode fast and then slowed down. She rode 1 mile.
- For the next 15 minutes, Carla rode at a steady pace until she arrived at her grandmother's house. She rode 3 miles.
- For the next 10 minutes, Carla visited her grandmother.
- For the next 5 minutes, Carla rode slowly at first but then began to ride faster. She rode 1 mile.

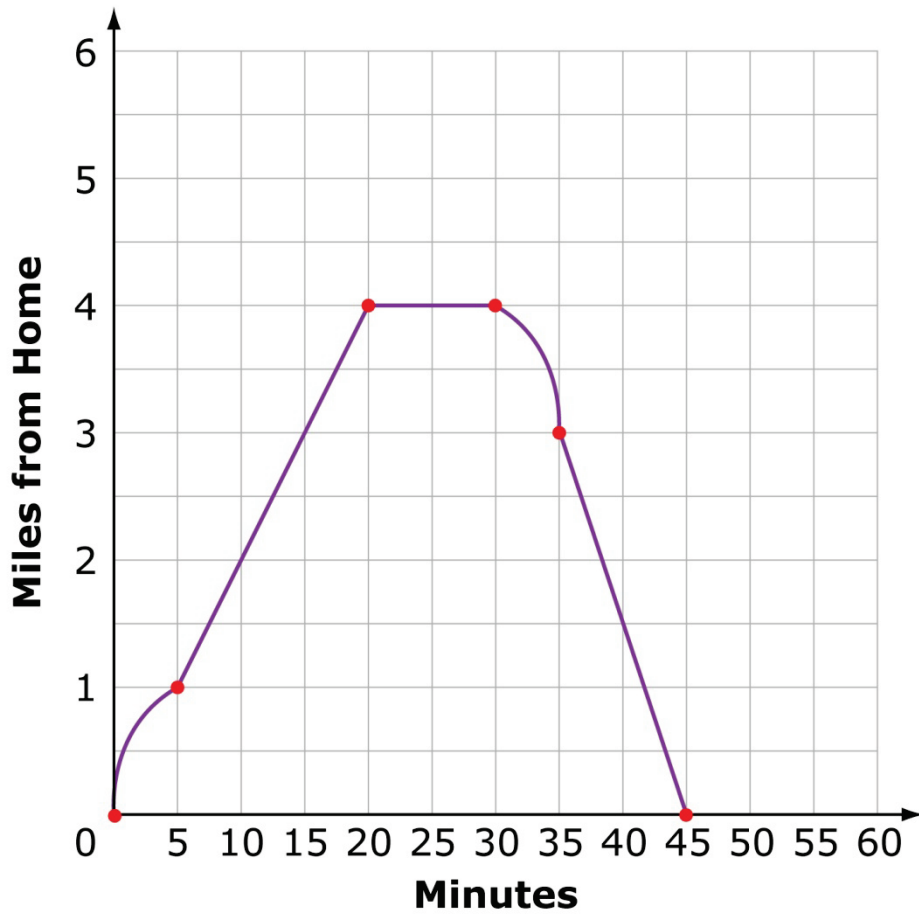
- For the last 10 minutes, Carla rode fast. She rode 3 miles at a steady pace.

Graph each part of Carla's trip. To graph part of her trip, first click the correct line type in the box. Then click in the graph to add the starting point and the ending point for that part of her trip. Repeat these steps until a graph of Carla's entire trip has been created.





Sample Top-Score Response:



Scoring Rubric:

Responses to this item will receive 0-2 points, based on the following:

2 points: The student shows a thorough understanding of how to sketch the graph of a function based on a verbal description. The student's response matches the Sample Top-score Response.

1 point: The student shows a partial understanding of how to sketch the graph of a function based on a verbal description. The student makes 1 or 2 minor errors in the graph, such as using a straight line when a curved line should be used or using a concave-up curve when a concave-down curve should be used.

0 points: The student shows inconsistent or no understanding of how to sketch the graph of a function based on a verbal description.