

Anchor Paper Scoring and Rationales - Task: Function of a Ride

Name: Student A

Criteria	Performance Level (Advanced, Proficient, Developing, Emerging)	Rationale
Mathematical Understanding	Proficient	The student demonstrates an understanding of the concepts and skills associated with the task and arrives at mostly correct solutions. The student correctly uses interval notation and found a reasonable regression equation.
Problem Solving	Proficient	The student's explanations support an understanding of the underlying math concepts. The student produces solutions that are relevant to the problem.
Communication and Reasoning	Proficient	The student reasoning is seen in the explanations given on parts 2, 3, and 5.
Representations and Connections	Proficient	The student's equation demonstrates the use of representations that model the task and is accurate. The student makes mathematically correct connections in their work identifying specific points.

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Name: Student B

Criteria	Performance Level (Advanced, Proficient, Developing, Emerging)	Rationale
Mathematical Understanding	Advanced	The student demonstrates an understanding of the concepts and skills associated with the task and arrives at all correct solutions. The student utilizes correct interval notation and determines a correct regression equation.
Problem Solving	Advanced	The student's strategy of estimating coordinates and using those to describe function features shows an understanding of the underlying math concepts. The student produces solutions that are relevant to the problem. Using Desmos to complete parts 6 & 7 is very efficient.
Communication and Reasoning	Advanced	The student reasoning is seen in the explanations given throughout. The student clearly explains their processes and reasoning.
Representations and Connections	Advanced	The student's regression equation is an accurate model of the situation. The student then makes clear connections between the regression equation and predicted values to the actual height of the roller coaster is part 7.

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Name: Student C

Criteria	Performance Level (Advanced, Proficient, Developing, Emerging)	Rationale
Mathematical Understanding	Developing	The student demonstrates a developing understanding of the mathematics. The student incorrectly uses notation for increasing and decreasing intervals although the regions are correct, while domain and range are incorrect. A reasonable regression equation is recorded, but no accompanying work or explanation indicates understanding.
Problem Solving	Developing	The students' partially correct solutions display a limited understanding of the mathematical concepts. The student produces some responses that are relevant, but does not confirm the reasonableness of those solutions.
Communication and Reasoning	Developing	The student reasoning is limited.
Representations and Connections	Developing	The student produces a correct regression equation, but only makes a partial connection to the relationship to the actual height of the roller coaster.

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Name: Student D

Criteria	Performance Level (Advanced, Proficient, Developing, Emerging)	Rationale
Mathematical Understanding	Emerging	The student demonstrates little to no understanding of concepts and skills related to the task.
Problem Solving	Developing	The student's strategies produce solutions that are mostly not relevant to the problem, but gives a few answers that indicate a limited understanding of some concepts.
Communication and Reasoning	Emerging	The student uses no mathematical language to communicate their thinking.
Representations and Connections	Emerging	The student's representation does not accurately model the situation.