

## Mathematics Performance Task Specific Rubric - Algebra I Train Task

	4	3	2	1
<b>Problem Solving and Reasoning</b>	<p>- Demonstrates a thorough understanding that:</p> <ul style="list-style-type: none"> <li>the problem represents a linear relationship.</li> <li>the curve of best fit is an estimate of the trend or pattern in the data and used to make predictions.</li> </ul> <p>-Uses sophisticated strategies to solve the problem accurately.</p> <ul style="list-style-type: none"> <li>Analyzes the strategy and the reasonableness of the solutions/predictions.</li> </ul> <p>-Demonstrates thorough and precise reasoning by providing:</p> <ul style="list-style-type: none"> <li>an accurate justification for all calculations and interpretations in the context of the problem.</li> <li>a logical and mathematically sound justification assessing the accuracy of predictions.</li> </ul> <p>-Provides a realistic evaluation of this new mathematical model, identifying the implications of this new model, and provide explanations in the context of the problem.</p>	<p>- Demonstrates a proficient understanding that:</p> <ul style="list-style-type: none"> <li>the problem represents a linear relationship.</li> <li>the curve of best fit is an estimate of the trend or pattern in the data and used to make predictions.</li> </ul> <p>-Uses correct strategies to solve the problem accurately.</p> <ul style="list-style-type: none"> <li>Achieves the correct or reasonable solutions/predictions (may have a minor mistake).</li> </ul> <p>-Demonstrates proficient reasoning by providing:</p> <ul style="list-style-type: none"> <li>a justification for all calculations and interpretations in the context of the problem.</li> <li>a mathematically sound justification assessing the accuracy of predictions.</li> </ul> <p>-Provides an evaluation of this new mathematical model, identifying the implications of this new model, and provide explanations in the context of the problem.</p>	<p>- Demonstrates a partial understanding that:</p> <ul style="list-style-type: none"> <li>the problem represents a linear relationship.</li> <li>the curve of best fit is an estimate of the trend or pattern in the data and used to make predictions.</li> </ul> <p>-Uses a partially correct strategy or a strategy that solves part of the problem.</p> <ul style="list-style-type: none"> <li>Arrives at incorrect solutions/predictions.</li> </ul> <p>-Demonstrates partial reasoning by providing:</p> <ul style="list-style-type: none"> <li>some justification for the calculations and interpretations in the context of the problem.</li> <li>a partial justification assessing the accuracy of predictions.</li> </ul> <p>-Provides a partially correct evaluation of this new mathematical model and provide explanations in the context of the problem.</p>	<p>- Demonstrates limited understanding that:</p> <ul style="list-style-type: none"> <li>that the problem represents a linear relationship.</li> <li>the curve of best fit is an estimate of the trend or pattern in the data and used to make predictions.</li> </ul> <p>-Uses an incorrect strategy to solve the problem.</p> <ul style="list-style-type: none"> <li>Shows little understanding of the problem and arrives at incorrect solutions/predictions.</li> </ul> <p>-Demonstrates limited reasoning by providing:</p> <ul style="list-style-type: none"> <li>an inconsistent or no justification for calculations and interpretations in the context of the problem.</li> <li>an inconsistent or no justification assessing the accuracy of predictions.</li> </ul> <p>-Shows no evaluation of the new mathematical model and makes no connections between the mathematics and the context of the problem.</p>

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<b>Representations and Connections</b>	<ul style="list-style-type: none"> <li>- Demonstrates a flexible use of graphical, tabular, and symbolic (equation) representations to solve the problem.</li> <li>-Uses multiple representations accurately to support and justify answers. (i.e. use the tabular representation to justify and support calculations using the equation).</li> <li>- Recognizes and uses mathematical connections to extend or generalize patterns in the context of the problem (i.e. making connections between the mathematical models and the implications of slope and the change in the x-intercept).</li> </ul>	<ul style="list-style-type: none"> <li>- Uses the appropriate and accurate representation to solve the problem.</li> <li>-Uses the identified representation accurately to solve the problem or uses a different representation in place of the one identified. (i.e. uses the table of values instead of the equation).</li> <li>- Recognizes and uses mathematical connections to make some generalizations in the context of the problem (i.e. making connections between the mathematical models and the implications of slope or the change in the x-intercept).</li> </ul>	<ul style="list-style-type: none"> <li>- Constructs partial or inaccurate representations to solve the problem.</li> <li>-Uses a representation, with some errors, to solve the problem.</li> <li>- Uses mathematical connections to make incorrect generalizations in the context of the problem.</li> </ul>	<ul style="list-style-type: none"> <li>-Constructs the scatter plot and makes no attempt to construct any of the other representations.</li> <li>-Makes no attempts using representations or uses representations inaccurately.</li> <li>-Makes no attempts to connect the mathematics and the context of the problem.</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>- Uses precise mathematical language to clearly communicate process and thinking.</li> </ul>	<ul style="list-style-type: none"> <li>- Communicates process and thinking in a sequential, coherent way</li> </ul>	<ul style="list-style-type: none"> <li>- Provides a partial communication of process or thinking</li> </ul>	<ul style="list-style-type: none"> <li>- Shows little or no communication of process or thinking</li> </ul>