

**Chapter 3 Problem Wrap-Up Rubric**

<b>Categories</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>
<b>Knowledge and Understanding</b> <ul style="list-style-type: none"> <li>Explains an alternate way to determine if Donatella's rocket would beat the former champion rocket.</li> </ul>	Demonstrates limited understanding of how to use a quadratic function to determine the maximum height.	Demonstrates some understanding of how to use a quadratic function to determine the maximum height.	Demonstrates considerable understanding of how to use a quadratic function to determine the maximum height.	Demonstrates thorough understanding of how to use a quadratic function to determine the maximum height.
<b>Thinking</b> <ul style="list-style-type: none"> <li>Prepares a plan to solve the problem.</li> <li>Carries out the plan.</li> </ul>	Needs extensive assistance to begin organizing a plan and needs clearly laid out steps to follow.	Needs some assistance to begin organizing a plan and needs some steps to follow.	Needs minimal assistance to organize and implement an effective strategy.	Needs no assistance to organize and implement an effective strategy.
<b>Communication</b> <ul style="list-style-type: none"> <li>Correct use of mathematical form.</li> <li>Clear explanations and full justifications.</li> </ul>	Makes many notational errors. Does not clearly explain or justify solution.	Makes few notational errors. Explains and justifies solution somewhat.	Makes no notational errors. Explains and justifies solution fully.	Makes no notational errors. Explains, justifies, and shows insight into the complexities of the solution.
<b>Application</b> <ul style="list-style-type: none"> <li>Uses research and applies knowledge of quadratic relations to justify the feasibility of a rocket reaching a maximum height of 45 m.</li> </ul>	Interprets and applies the information ineffectively, needing considerable assistance.	Interprets and applies the information somewhat effectively, needing some assistance.	Interprets and applies the information with considerable effectiveness, needing little assistance.	Unassisted, interprets and applies the information with a high degree of effectiveness.