

**Section 4.4 Achievement Check Rubric**

Category	Level 1	Level 2	Level 3	Level 4
<b>Knowledge and Understanding</b> <ul style="list-style-type: none"> <li>Graphs the quadratic relation</li> <li>Determines the charge per lesson that maximizes revenue</li> </ul>	Demonstrates limited understanding of quadratic relations and finding the charge per lesson that maximizes revenue. Makes major errors.	Demonstrates some understanding of quadratic relations and finding the charge per lesson that maximizes revenue. Makes minor errors.	Demonstrates considerable understanding of quadratic relations and finds the charge per lesson that maximizes revenue correctly.	Demonstrates thorough understanding of quadratic relations and finds the charge per lesson that maximizes revenue correctly.
<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>Clear explanations and full justifications</li> <li>Correct use of mathematical language</li> </ul>	Does not clearly explain or justify solution. Maintains the correct units in some of the solution.	Explains and justifies solution somewhat. Maintains the correct units throughout most of the solution.	Explains and justifies solution fully. Maintains the correct units throughout the solution.	Explains, justifies and shows insight into the complexities of the solution. Maintains the correct units throughout the solution.
<b>Application</b> <ul style="list-style-type: none"> <li>Writes an equation of the form <math>y = a(x - h)^2 + k</math> to represent the relation</li> <li>Predicts how the parabola would change if the cost per lesson decreased</li> </ul>	Interprets the information ineffectively and writes an equation to represent the relation with major errors. Has difficulty making reasonable predictions.	Interprets the information somewhat effectively and writes an equation to represent the relation with minor errors. Has some difficulty making reasonable predictions.	Interprets the information with considerable effectiveness and correctly writes an equation to represent the relation. Has little difficulty making reasonable predictions.	Interprets the information with a high degree of effectiveness and correctly writes an equation to represent the relation. Has no difficulty making reasonable predictions.