

Problem Assessment Rubrics

Group Members: _____

CATEGORY	Exemplary	Proficient	Partially Proficient	Unsatisfactory
Understanding	<p>The solution shows a deep understanding of the problem including the ability to identify the appropriate mathematical concepts and the information necessary for its solution.</p> <p>The solution completely addresses all components presented in the tasks.</p>	<p>The solution shows that the student has a broad understanding of the problem and the major concepts necessary for its solution.</p> <p>The solution addresses all of the components presented in the tasks.</p>	<p>The solution is not complete indicating that parts of the problem are not understood.</p> <p>The solution addresses some, but not all of the components presented in the tasks.</p>	<p>There is no solution, or the solution has no relationship to the task.</p> <p>Inappropriate concepts are applied and/or procedures are used.</p> <p>The solution addresses none of the components presented in the tasks.</p>
Strategies, Reasoning, Procedures	<p>Uses a very efficient and sophisticated strategy leading directly to a solution.</p> <p>Employs refined and complex reasoning and verifies the solution and/or evaluates the reasonableness of the solution</p> <p>Applies mathematical procedures accurately to correctly solve the problem and verify the results.</p> <p>Makes relevant observations and/or connections.</p>	<p>Uses a strategy that leads to a solution of the problem.</p> <p>Uses effective reasoning and verifies the solution.</p> <p>Mathematical procedures used to solve the problem.</p> <p>All parts are correct and a correct answer is achieved.</p>	<p>Uses a strategy that is partially useful, leading some way toward a solution, but not to a full solution of the problem.</p> <p>Some evidence of reasoning can be seen.</p> <p>Could not completely carry out mathematical procedures.</p> <p>Some parts may be correct, but a correct answer is not achieved.</p>	<p>No evidence of a strategy or procedure, or uses a strategy that does not help solve the problem.</p> <p>No evidence of reasoning can be seen.</p> <p>There were so many errors in mathematical procedures that the problem could not be resolved.</p> <p>OR</p> <p>No mathematical procedures were used to solve the problem.</p>
Communication	<p>There is a clear, effective explanation detailing how the problem is solved.</p> <p>All of the steps are included so that the reader does not need to infer how and why decisions were made.</p> <p>Mathematical representation is actively used as a means of communicating ideas related to the solution of the problem.</p> <p>There is precise and appropriate use of scientific terminology.</p>	<p>There is a clear explanation.</p> <p>Most steps are included so that the reader has a good idea how and why decisions were made.</p> <p>There is appropriate use of accurate mathematical representation.</p> <p>There is an effective use of scientific terminology.</p>	<p>There is an incomplete explanation; it may not be clearly presented.</p> <p>Some steps are included, but the reader has to infer how and why some decisions were made.</p> <p>There is some use of appropriate mathematical representation.</p> <p>There is some use of scientific terminology appropriate of the problem.</p>	<p>There is no explanation of the solution, the explanation cannot be understood or it is unrelated to the problem.</p> <p>No steps are included for the reader to understand how and why decisions were made.</p> <p>There is no use or inappropriate use of mathematical representations</p> <p>There is no use, or mostly inappropriate use, of scientific terminology.</p>