

Mathematics Problem Solving and Communication Rubric

	Problem Solving (understands problem/task, plan/strategy, computation/solution)	Communication (explanation, details (e.g. use of graphs, tables, charts, figures, diagrams, numbers, symbols), math language/notation/units)
	<ul style="list-style-type: none"> An understanding of the problem or task is evident; appropriate mathematical concepts and procedures needed for task are evident A strategy is evident; the strategy is developed and leads to a solution; The computations or solutions are correct; components are answered 	<ul style="list-style-type: none"> Strategies, processes or ideas are explained; solution statement is evident Provides details Uses appropriate mathematical language/notation/units
Proficient (4)	<ul style="list-style-type: none"> A thorough understanding of the entire task is evident; all appropriate mathematical concepts and procedures needed for the task are evident A strategy is clearly evident; the strategy is well developed and leads directly to a solution The solution addresses all components of the task and is correct; computations are correct although a minor error, omission or transposition of number or symbols may occur. 	<ul style="list-style-type: none"> The explanation of strategies, processes or ideas is logical and clear; a solution statement is clearly evident and complete Details (words, pictures, diagrams, etc) are consistently clear and complete Appropriate math language/notation/units are consistently used and are correct
Competent (3)	<ul style="list-style-type: none"> A general understanding of the entire task is evident; most of the mathematical concepts and procedures necessary for the task are evident A strategy is evident; the strategy is mostly developed and leads to a solution The solution address all components of the task although it may or may not be correct; computations are mostly correct and may or may not lead to a correct solution 	<ul style="list-style-type: none"> The explanation of strategies, processes or ideas is mostly logical and clear; some processes or ideas may have to be inferred; a solution statement is evident but may be separated throughout the task Details (words, pictures, diagrams, etc) are mostly clear and complete Appropriate math language/notation/units are often used and are correct; minor errors in notation/units may be present
Developing (2)	<ul style="list-style-type: none"> A partial understanding of the entire task or an understanding of part of the task is evident; some mathematical concepts and procedures necessary for the task are evident Strategy is somewhat evident; the strategy is incomplete or leads to an incomplete solution Some parts of the solution are correct; computations have errors; only some of the components have been addressed 	<ul style="list-style-type: none"> The explanation of strategies, processes or ideas is somewhat clear for the components that were addresses; many processes or ideas is somewhat clear for the components that were addressed; many processes or ideas must be inferred; part of a solution statement is evident Details (words, pictures, diagrams, etc.) are somewhat clear; some details are missing Math language/notation/units are sometimes used; some terminology/notation/units may be used inappropriately
Limited (1)	<ul style="list-style-type: none"> Little or no understanding of the entire task is evident; mathematical concepts are not present or are incorrect Little or no evidence of a strategy; the strategy, if evident does not lead to a solution The solution is not correct; computation are not shown and/or not correct; few, if any, of the components have been addressed 	<ul style="list-style-type: none"> The explanation of the strategies, processes, or ideas is vague or disorganized; a solution statement is not evident Details (words, pictures, diagrams, etc) are vague and mostly lacking Math language/notation/units, if present, are rarely used or not used correctly