Problem Solving Generic Rubric				
	In the Flow	**Very Close**	**Getting Closer**	**Beginning**
Conceptual Understanding	The student related the features of this concept to other concepts and applied this to diverse, realistic and new contexts.	The student identified many key features of the concept, solved problems related to the concept and applied the concept to new contexts.	The student identified some key features of the concept, solved problems and related the concept to a limited number of new contexts.	The student recognized some features of the concept under consideration and solved simple problems directly relating to the concept.
Representation	The student used a model or representation that helped to clarify and extend the problem's meaning.	The student used a variety of models or representations to explore the relationships in the problem.	The student used a model or representation to explore the relationships in the problem.	The student used a model or representation that was insufficient or inaccurate.
Strategies	The student chose innovative and insightful strategies for solving the problem.	The student chose appropriate, efficient strategies for solving the problem.	The student used an oversimplified approach to the problem.	The student's strategies were not appropriate for the problem.
	The student proved that his/her solution was correct and that his/her approach was valid.	The student justified each step of his/her work.	The student offered little or no explanation of the strategies used.	The student didn't seem to know where to begin.
Reasoning	The student provided examples and/or counter examples to support his/her solution.	The logic of the student's solution was apparent.	The student sometimes made leaps in logic that were hard to follow.	The student's reasoning did not support the student's work.
Computation and Execution	All aspects of the student's solution were completely accurate.	The student's computations were essentially accurate.	The student made minor computational errors.	The student made errors in computation serious enough to flaw the solution.
	The student showed multiple ways to compute his/her answer.	The student gave evidence for his/her solution that clearly supported his/her solution.	The student gave evidence for his/her solution that was inconsistent or unclear.	The student gave no evidence of how he/she arrived at his/her answer.
Technology	The student selected a variety of	The student selected appropriate	The student worked with an identified	The student worked with an identified

	appropriate technological applications to analyze and generalize a variety of patterns, using tables, diagrams, graphs, words, and, when possible, symbolic rules.	technological applications to analyze and generalize a variety of patterns, using tables, diagrams, graphs, words, and, when possible, symbolic rules.	technological application to analyze and generalize a pattern, using a limited number of representations.	technological application to analyze a pattern, using a limited number of representations.
Communication	The student's explanation was clear and concise, providing an in-depth explanation of his/her reasoning.	The student's explanation was well organized, flowed logically and was easy to follow.	The student's explanation was redundant or hard to follow in places.	The student's explanation rambled without a clear focus.
Insight	The student related the underlying structure of the problem to other similar problems.	The student connected his/her solution process to other problems, areas of mathematics or applications.	The student's solution hinted at a connection to an application or another area of mathematics.	The student found no connections to other disciplines or mathematical concepts.

The "flow" theory was formulated by Mihály Csíkszentmihályi. Csíkszentmihályi's research found that people who became totally immersed in demanding and rewarding activity indicated this to be the most enjoyable and valuable experience they could possibly have. People who are "in the flow" report the following:

1. completely involved, focused, concentrating—with this either due to innate curiosity or as the result of training
2. sense of ecstasy—of being outside everyday reality
3. great inner clarity—knowing what needs to be done and how well it is going
4. knowing the activity is doable—that the skills are adequate, and neither anxious or bored
5. sense of serenity—no worries about self, feeling of growing beyond the boundaries of ego—afterwards feeling of transcending ego in ways not thought possible
6. timeliness—thoroughly focused on present, don't notice time passing
7. intrinsic motivation—whatever produces the "flow" becomes its own reward (Csíkszentmihályi 1990).

At the highest level on the above assessment rubric, "in the flow" refers to those students who engage completely in a compelling task.

Bibliography

Csíkszentmihályi, Mihály. *Flow: The Psychology of Optimal Experience*. New York, NY: Harper Perennial, 1990.