

Mathematics Problem Solving Rubric, Grades 2-9

	Novice	Apprentice	Practitioner	Expert
Understanding	Misses fundamental concepts underlying problem.	Understands some major concepts, but misses others.	Solid understanding of a major approach to the problem. Major concepts are understood.	Solid understanding of a major approach to the problem with indications of alternative approaches, or with sufficient details to show ease in understanding.
Strategies, Reasoning & Procedures	Does not know common strategies or procedures for solving problem. Reasoning is muddled or otherwise incorrect. Work cannot lead to a correct solution.	With assistance can manage common strategies or procedures for solving problem. Reasoning shows a possible approach to the problem. Work could lead to a correct solution, but is not there yet.	A plan for solving the problem is clearly understood and main procedures and strategies are in place. Reasoning is essentially correct, except for minor aspects.	Clear evidence of plan for solving problem and all strategies and procedures are clearly understood. Errors are minimal, if present. Reasoning is clear and correct in details as well as in main aspects.
Communication	Explanation is very sketchy and/or shows confusion or cannot be clarified.	Explanation shows some of the steps undertaken. Needs help to give full explanation.	Explanation is clear and all major steps are present. Some details may be missed or some language may not be completely precise.	Explanation lays out problem solution clearly and completely. More than one solution is indicated, or detail of solution shows deep understanding.