Mathematics Problem Solving Rubric Any Grade

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