

Mathematics Core Assessment Rubric

(November 15, 2015)

Objective	Highly proficient - 4	Proficient - 3	Approaching proficiency - 2	Not proficient - 1
<p>1.1 Demonstrate their problem solving skills, including their ability to interpret problem situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning</p>	<p>Demonstrates the ability to construct a clear problem statement with evidence of all relevant contextual factors. Identifies one or more solutions that indicate deep comprehension of the problem. Evaluates thoroughly and implements solution in a manner that addresses thorough and deeply multiple contextual factors of the problem.</p>	<p>Demonstrates the ability to construct a clear problem statement with evidence of most relevant contextual factors. Identifies one or more solutions that indicate comprehension of the problem. Evaluates adequately and implements solution in a manner that addresses thorough and multiple contextual factors of the problem in a surface manner.</p>	<p>Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial. Identifies only a single solution that is “off the shelf” rather than individually designed to address the specific contextual factors of the problem. Evaluation is brief (for example, evaluation lacks depth) and solution is implemented in a manner that addresses the problem statement but ignores contextual factors.</p>	<p>Demonstrates a limited ability in identifying a problem statement or related contextual factors. Identifies one or more approaches for solving the problem that do not apply within a specific context. Evaluation of solutions is superficial (for example contains cursory, surface level explanation) and solution is implemented in a manner that does not directly address the problem statement.</p>
<p>1.2 Demonstrate their ability to approach mathematical ideas or problems from multiple perspectives (e.g., by using the internal connections between geometry, algebra, and numerical computation, applying the connections between theory and applications; or distinguishing between a formal proof and a less formal arguments and understanding the different roles these play in mathematics).</p>	<p>Demonstrates a full and accurate understanding of how mathematical ideas or problems can be approached from multiple perspectives.</p>	<p>Demonstrates a competent understanding and mostly accurate of how mathematical ideas or problems can be approached from multiple perspectives</p>	<p>Demonstrates a partial understanding of how mathematical ideas or problems can be approached from multiple perspectives. May have some errors, but the approach is generally appropriate.</p>	<p>Demonstrates an extremely limited or lack of understanding of how mathematical ideas or problems can be approached from multiple perspectives. May have significant errors.</p>

<p>1.3 Demonstrate an understanding of mathematical content (including the limits to its application) that goes beyond mere fluency in using mathematical symbols, language and formulas.</p>	<p>Demonstrates a solid understanding of the appropriate mathematical concepts and the information necessary for the solution of the problem(s).</p> <p>Communicates a solid understanding of mathematical concepts with clarity and precision, including appropriate use of mathematical terminology and notation in the explanation of work.</p>	<p>Demonstrates a satisfactory understanding of the major concepts necessary for the solution of the problem(s).</p> <p>Effectively communicates understanding of mathematical concepts including appropriate use of mathematical terminology and notation in the explanation of work.</p>	<p>The solution is not complete, indicating that the student has a limited understanding of the major concepts necessary for the solution of the problem(s).</p> <p>Limited ability to communicate understanding of mathematical concepts including the inappropriate use of mathematical terminology and notation in the explanation of work.</p>	<p>There is no solution, or the solution has no relationship to the task indicating that the student has a little to no understanding of the major concepts necessary for the solution of the problem(s).</p> <p>Unable to communicate understanding of mathematical concepts. There is no appropriate use of mathematical terminology and notation in the explanation of work.</p>
---	--	--	--	---