

GEAC RUBRIC - MATHEMATICAL REASONING

Mathematical Reasoning Learning Outcome: Effective skills in mathematical computation, application and comprehension of quantitative information in a variety of situations.

Rubric Explanation: the mathematical reasoning rubric can be used to assess mathematical reasoning skills with any mathematics-oriented application problem embedded within an instructor's course work. The rubric assesses a student's mathematical reasoning skills by examining four criteria exhibited by the student in solving the application problem.

Criteria	Proficient (3)	Progressing (2)	Developing (1)
<p>Identify: The student has examined the given information and has identified the appropriate mathematical model/strategy to address the problem.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at or above a level expected by the evaluator.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at a level less than expected by the evaluator. Minor improvement is needed for proper illustration of the criterion on the student's work</p>	<p>A student's performance for a given criterion should be scored at this level if the student has not sufficiently demonstrated this criterion in the necessary work. This includes one or more major errors, or multiple minor errors leading to an incorrect solution for the problem. Major improvement is needed for proper illustration of this criterion in the student's work.</p>
<p>Apply: The student has applied the appropriate model/strategy to the problem and carried out accurate logical reasoning in solving the problem.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at or above a level expected by the evaluator.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at a level less than expected by the evaluator. Minor improvement is needed for proper illustration of the criterion on the student's work</p>	<p>A student's performance for a given criterion should be scored at this level if the student has not sufficiently demonstrated this criterion in the necessary work. This includes one or more major errors, or multiple minor errors leading to an incorrect solution for the problem. Major improvement is needed for proper illustration of this criterion in the student's work.</p>
<p>Label: The student has applied correct units of measurement to the problem.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at or above a level expected by the evaluator.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at a level less than expected by the evaluator. Minor improvement is needed for proper illustration of the criterion on the student's work</p>	<p>A student's performance for a given criterion should be scored at this level if the student has not sufficiently demonstrated this criterion in the necessary work. This includes one or more major errors, or multiple minor errors leading to an incorrect solution for the problem. Major improvement is needed for proper illustration of this criterion in the student's work</p>
<p>Interpret: The student has demonstrated a correct interpretation for the result of their computation within the context of the problem.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at or above a level expected by the evaluator.</p>	<p>A student's performance for a given criterion should be scored at this level if the student has demonstrated this criterion at a level less than expected by the evaluator. Minor improvement is needed for proper illustration of the criterion on the student's work</p>	<p>A student's performance for a given criterion should be scored at this level if the student has not sufficiently demonstrated this criterion in the necessary work. This includes one or more major errors, or multiple minor errors leading to an incorrect solution for the problem. Major improvement is needed for proper illustration of this criterion in the student's work.</p>