Assessment Rubric: General Education Mathematics

	Exceeds Expectations	Meets Expectations	Falls Below Expectations	No Credit
Interpretation *Ability to glean information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)*	Provides accurate explanations of information presented in mathematical forms. *For instance, accurately explains the trend data shown in a graph.*	Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. *For instance, accurately explains trend data shown in a graph, but may have a minor error in the slope of the trend line.*	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. *For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.*	No meaningful work done.
Representation *Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)*	Competently converts relevant information into an appropriate and desired mathematical portrayal.	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.	No meaningful work done.
Calculation *Use the tools of mathematics.*	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. *For example, the student decides to use the quadratic formula to solve and problem and substitutes and simplifies appropriately.*	Calculations attempted represent only a portion of the calculations required to comprehensively solve the problem. *For example, the student decides to use the quadratic formula to solve and problem and substitutes incorrectly or makes a minor simplification error.*	Calculations are attempted but are both unsuccessful and are not comprehensive. *For example, the student decides to use the quadratic formula to solve and problem and substitutes incorrectly and has simplification errors.*	No meaningful work done.
Application *Ability to apply mathematical generalizations, principles, theories, or rules to real world problems.*	Select and apply the appropriate mathematical principles to correctly solve a real world application problem taking into account important assumptions. (*In calculating the area of an irregular polygon, student correctly divides the area into simple shapes and correctly uses known formulae to calculate the areas.*)	Chooses appropriate mathematical principles but has minor errors in applying principles to solve real world problem. (*In calculating the area of an irregular polygon, student correctly subdivides the area into simple shapes and improperly uses formulae to calculate the areas.*)	Attempts to solve application problem but is unsuccessful. (*Student knows some of the technique for subdivision of an irregular polygon but incorrectly divides the area; knows some simple area formulae, but cannot put all the steps together to get a correct result.*)	No meaningful work done.
Analysis *Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis*	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work. (*Interpolates or extrapolates data from a graph or table to calculate information not specifically given; creates a formula from information to predict results for future events.*)	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work. (*Given a problem statement, the correct relationship can be identified and known values used to calculate the desired unknown.*)	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work. (*Given a problem statement, known values can be correctly identified, however, the appropriate relationship is not found or applied correctly and the desired result is not found.*)	No meaningful work done.
Communication *Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)*	Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven. *For instance, effectively uses verbal and/or written skills to explain the quantitative evidence.*	Uses quantitative information, but does not completely connect it to the argument or purpose of the work. *For instance, the quantitative evidence may be correct, but verbal and/or written skills are not completely developed.*	Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as "many," "few," "increasing," "small," and the like in place of actual quantities.) *For instance, does not effectively use verbal and/or written skills to explain quantitative evidence.*	No meaningful work done.