

Quantitative Reasoning Outcome Rubric

Criteria	Advanced 4	Proficient 3	Developing 2	Beginning 1
Competence in applied analytic skills	Assumptions are clearly integrated and correctly analyzed, decisions on procedure are appropriate based on given information.	Assumptions are integrated and analyzed with minor errors, decisions on procedure are appropriate based on given information.	Assumptions are integrated and analyzed with major errors, or were analyzed with minor errors but decisions on procedure are not correct.	Analysis of assumptions are practically non-existent, or decisions on procedure are not clear.
Mathematical problem-solving skills	Information is correctly summarized; effort is made to indicate the solution process; and the overarching process is done correctly.	Given information is summarized and the overarching process is done with only minor errors.	Given information is summarized incorrectly. The process lacks coherence or has major errors.	There is no attempt, or a very minimal attempt, to summarize the problem or complete the problem.
Arithmetic, algebraic, trigonometric, or calculus operations that involve levels of abstraction	Arithmetic, algebraic, trigonometric and/or calculus operations are correctly identified, performed successfully, and are presented clearly.	Arithmetic, algebraic, trigonometric, and/or calculus operations are essentially complete with potentially with minor errors, or are complete but not presented clearly.	Arithmetic, algebraic, trigonometric, and/or calculus operations performed are insufficient to complete the problem, or are performed unsuccessfully.	Either no attempt or a very minimal attempt is made to perform the needed arithmetic, algebraic, trigonometric, and/or calculus operations.
Checking validity	Correctly checks the validity of the solution and/or abstracts the general process.	Attempts to check the validity of the solution and/or abstract the general process.	Attempts to check the solution and/or abstract the process are minimal.	Attempts to check the solution and/or abstract the process are nonexistent..

Notes: Criteria taken from course inclusion requirements, some levels inspired by Numeracy/QL SLOs from AAC&U, University of Hawaii, CUNY and CSU East Bay.

Student Learning Outcomes

Undergraduate Institutional Learning Outcome (ILO #3) Quantitative Reasoning:

Mount graduates will be able to apply college-level mathematical reasoning to analyze and explain real world issues. (GE3A)

Performance Goals:

- Freshmen/Sophomore Students - 65% of students will be at a 3 or higher on the 4-point rubric
- Junior/Senior Students - 75% of students will be at a 3 or higher on the 4-point rubric

Rubric Development Process

The Quantitative Reasoning Rubric was developed collaboratively in Spring 2017 with the Curriculum Committee and the Assessment Committee, with additional input from the Mathematics Department.