D1 Quantitative Literacy Rubric

Quantitative literacy also known as Numeracy or Quantitative Reasoning—is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

D1: Students will demonstrate the ability to interpret, represent, calculate, apply, and analyze numerical data in a variety of settings and will make assumptions and communicate those assumptions based on quantitative information.

	Capstone 4	**Milestones** 3	2	**Benchmark** 1
Interpretation	Understands and provides accurate explanations of numerical information . Makes inferences based on that information.	Provides accurate explanations of information presented in mathematical form.	Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors.	Attempts to explain information presented in mathematical forms but draws incorrect inconclusions about what the information means.
Representation	Skillfully converts relevant information into a mathematical portrayal in a way that contributes to a further or deeper understanding. Presents all numerical information accurately and effectively.	Competently converts relevant information into a mathematical portrayal in a way that contributes to better understanding. Presents most numerical information accurately and effectively.	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate. Numerical information presented does not connect with argument or purpose of the work.	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate. Numerical information is not used effectively and/or with complete accuracy.
Calculation	Calculations solve the problem successfully and comprehensively and are presented clearly and concisely.	Calculations are sufficient to solve the problem, completed correctly, and presented effectively.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to solve the problem.	Calculations are attempted but are neither successful nor presented completely.
Application/ Analysis	Uses numerical information as the basis for deep and thoughtful judgments, drawing insightful, careful conclusions based on the relationships among quantities while explaining assumptions.	Uses numerical information as the basis for thoughtful judgments, drawing qualified conclusions. Understands the relationships among quantities and describes assumptions.	Uses numerical information as the basis for obvious but plausible conclusions. Acknowledges assumptions but doesn't explain them.	Uses numerical information as the basis for basic judgments, though some application or analysis may be inaccurate or incomplete. Does not describe assumptions with accuracy or rationale.

Adapted from "Quantitative Literacy VALUE Rubric" by the Association of American Colleges and Universities, 2009, https://www.aacu.org/value-rubrics.