

Quantitative Reasoning Scoring Form

Student/Course: _____

Evaluator: _____

	Capstone 4	Milestone 3	Milestone 2	Benchmark 1	0
Interpretation <i>Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)</i>	Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. <i>For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</i> <input type="checkbox"/>	Provides accurate explanations of information presented in mathematical forms. <i>For instance, accurately explains the trend data shown in a graph.</i> <input type="checkbox"/>	Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. <i>For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.</i> <input type="checkbox"/>	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. <i>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.</i> <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>
Representation <i>Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)</i>	Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding. <input type="checkbox"/>	Competently converts relevant information into an appropriate and desired mathematical portrayal. <input type="checkbox"/>	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate. <input type="checkbox"/>	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate. <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.) <input type="checkbox"/>	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. <input type="checkbox"/>	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem. <input type="checkbox"/>	Calculations are attempted but are both unsuccessful and are not comprehensive. <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>
Application / Analysis <i>Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis</i>	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work. <input type="checkbox"/>	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work. <input type="checkbox"/>	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work. <input type="checkbox"/>	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work. <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>
Assumptions <i>Ability to make and evaluate important assumptions in estimation, modeling, and data analysis</i>	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions. <input type="checkbox"/>	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate. <input type="checkbox"/>	Explicitly describes assumptions. <input type="checkbox"/>	Attempts to describe assumptions. <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>
Communication <i>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)</i>	Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality <input type="checkbox"/>	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. <input type="checkbox"/>	Uses quantitative information, but does not effectively connect it to the argument or purpose of the work. <input type="checkbox"/>	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.) <input type="checkbox"/>	Does not meet benchmark 1 <input type="checkbox"/>