Quantitative Foundations (Math) Rubric

Criteria	Exceeds Standard	Meets Standard	Nearly Meets Standard	
	4	3	2	
Interpretation Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)	Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggests about future events.	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 miscalculate the slope of the trend line.	Pro infc but cor exp mis
Representation Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)	Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.	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.	Cor res ina
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.	Cal uns
Application/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 deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Use bas hes cor
Assumptions Ability to make and evaluate important assumptions in estimation, modeling, and data analysis	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.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Atte

Does Not Meet Standard	No Evidence	
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ovides somewhat accurate explanations of ormation presented in mathematical forms, t occasionally makes minor errors related to mputations or units. For instance, accurately plains trend data shown in a graph, but may scalculate the slope of the trend line.	No Evidence.	
mpletes conversion of information but sulting mathematical portrayal is appropriate or inaccurate.	No Evidence.	
lculations are attempted but are both successful and are not comprehensive.	No Evidence.	
es the quantitative analysis of data as the sis for tentative, basic judgments, although is sitant or uncertain about drawing nclusions from this work.	No Evidence.	
empts to describe assumptions.	No Evidence.	

CommunicationExpressingquantitative evidencein support of theuses quantitative information in connectionargument or purposeof the work (in termsof what evidence isof what evidence isexplicates it with consistently high quality.used and how it isformatted, presented,and contextualized)	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.)	No Evidence.
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