## **Rubric for Assessing Mathematical Content**

	Level 1	Level 2	Level 3	Level 4
<ul> <li>Use of mathemat- ical terminology and notation</li> </ul>	The student			
	<ul> <li>uses terminology or notation inconsis- tently or incorrectly; makes major errors</li> </ul>	<ul> <li>usually uses correct terminology and notation; may make minor errors</li> </ul>	<ul> <li>consistently uses correct terminology and notation</li> </ul>	<ul> <li>consistently uses correct terminology and notation which enhances the presentation</li> </ul>
Mathematical	The student			
Content	<ul> <li>presents material with mathematical content that is incorrect or incomplete; major errors or omissions</li> </ul>	<ul> <li>presents material with mathematical content that is gener- ally correct and com- plete; may have minor errors or omissions</li> </ul>	<ul> <li>presents material with mathematical content that is com- pletely correct and complete</li> </ul>	<ul> <li>presents material with mathematical content that is completely correct and complete and that is always pertinent to the presentation</li> </ul>
• Logical Reasoning	The student			
	<ul> <li>presents the mathematical content in an illogical manner; major steps are omitted or significant leaps required to follow development.</li> </ul>	<ul> <li>presents the mathe- matical content in a fairly logical manner; minor steps may be omitted.</li> </ul>	<ul> <li>presents the mathematical content in a logical manner.</li> </ul>	<ul> <li>presents the mathematical content in a logical manner, with all steps clearly shown.</li> </ul>
<ul> <li>Identification and Articulation of Assumptions</li> </ul>	The student			
	<ul> <li>states few or no assumptions</li> </ul>	<ul> <li>states most assumptions</li> </ul>	<ul> <li>states all assumptions explicitly</li> </ul>	<ul> <li>states explicitly all assumptions and their implications</li> </ul>
<ul> <li>Identification and Articulation of Limitations</li> </ul>	The student			
	<ul> <li>does not identify any limitations of the analysis</li> </ul>	<ul> <li>identifies some limitations of the analysis</li> </ul>	<ul> <li>identifies all limitations of the analysis</li> </ul>	<ul> <li>identifies all limitations of the analysis and suggests ways to remove these limitations</li> </ul>
<ul> <li>Extensions of the Analysis</li> </ul>	The student			
	<ul> <li>does not identify extensions of the analysis</li> </ul>	<ul> <li>identifies some possible extensions of the analysis</li> </ul>	<ul> <li>identifies several possible extensions of the analysis</li> </ul>	<ul> <li>identifies possible extensions of the analysis and discusses these in detail</li> </ul>
Conclusions	The student			
	<ul> <li>does not make conclusions or makes conclusions not justified by the analysis</li> </ul>	<ul> <li>makes some conclusions that follow logically from the analysis</li> </ul>	<ul> <li>makes conclusions that follow logically from the analysis</li> </ul>	<ul> <li>makes thorough conclusions that follow logically from the analysis</li> </ul>

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• Audience Questions	The student			
	<ul> <li>is unable to answer many audience questions and/or is usually unable to justify with mathematical reasoning</li> </ul>	<ul> <li>answers and justifies some audience questions with mathematical reasoning</li> </ul>	<ul> <li>answers and justifies most audience questions with mathematical reasoning</li> </ul>	<ul> <li>answers and justifies all audience questions with mathematical reasoning</li> </ul>