

## Problem 1

<i>Criteria</i>	<b>Strong</b>	<b>Medium</b>	<b>Poor</b>	<i>Points</i>
<b>Summary Sheet: Interpretation of Contest Problem</b>	Clear background, restates the problem and specifies focus areas of the paper; easy to find and is consistent throughout the paper  <i>(5 points)</i>	Mentions the problem, some goals are mentioned and consistently followed  <i>(3 points)</i>	Problem not restated or hard to find  <i>(1 point)</i>	5/5
<b>Summary Sheet: Overview of Methods</b>	Indicates the methodology used, as well as their purposes in a chronological fashion; easy to understand and not too technical  <i>(10 points)</i>	Methods stated, but is unclear and difficult to understand  <i>(6 points)</i>	Methods barely or not mentioned with no explanations given  <i>(1 points)</i>	9/10
<b>Summary Sheet: Statement of Conclusions</b>	Important results that directly answer the problem are included without becoming too specific, possible strengths and weaknesses mentioned  <i>(10 points)</i>	Results included, but not clear and/or too technical  <i>(6 points)</i>	Few or no results, strengths and weaknesses not mentioned  <i>(1 points)</i>	8/10
<b>Solution: Assumptions/ Justifications</b>	States why assumptions are made, how to justify them, and how they might limit the model  <i>(5 points)</i>	More than 25% of the solutions section do not meet the criteria, some major assumptions are mentioned  <i>(3 points)</i>	More than 50% do not meet the criteria, major assumptions are left out  <i>(1 point)</i>	5/5

<b>Solution: Usage of Method(s)</b>	Method(s) are used correctly, efficiently, and effectively for solving the problem  <i>(10 points)</i>	Method(s) are used correctly but do not return a reasonable result or are inefficient for solving the problem  <i>(6 points)</i>	Method(s) are incorrectly utilized  <i>(1 points)</i>	9/10
<b>Solution: Explanation</b>	All variables are clearly labeled, solution has detailed, accurate, and concise mathematical explanations for each step  <i>(25 points)</i>	Presentation of solution is somewhat detailed, accurate, and concise, graphs and illustrations are explained  <i>(16 points)</i>	Poor labeling of variables, presentation is vague/unclear and long winded  <i>(5 points)</i>	20/25
<b>Solution: Supporting Figures and Graphics*</b>	Graphs are pleasing and straightforward, using <i>enough</i> graphs to explain the model <b>(5 points)</b> *If no graphs are presented and the explanation is sufficient without graphs, the "solution: explanation" section will be worth 30 points.	Some graphs are hard to understand and/or simply unnecessary  <b>(3 points)</b>	Graphs are poorly constructed  <b>(1 point)</b>	5/5
<b>Solution: Sensitivity/ Stability</b>	Shows how the model responds to change in assumptions or parameters, thoughtfully accounts for and explains any possible errors  <i>(5 points)</i>	Some analysis is present, with little to no recognition of errors  <i>(3 points)</i>	Insufficient analysis, none or almost no data presented, error interpretation is non-existent  <i>(1 point)</i>	5/5
<b>Solution: Strengths &amp; Weaknesses</b>	States when the model can be used, proposes strengths and weaknesses for each model in an insightful and reflective manner  <i>(5 points)</i>	Some comments are not insightful or reflective  <i>(3 points)</i>	Not enough strengths and/or weaknesses OR less than 50% of remarks are above par <b>(1 point)</b>	5/5

<b>Conclusion</b>	The purpose, method, and result are clearly listed for each model  <i>(10 points)</i>	Summary of results is unclear, but the general idea of the group's findings is present  <i>(6 points)</i>	Few or none of the requirements are present  <i>(1 point)</i>	8/10
<b>Format</b>	0-1 criteria missing from the following: - Length does not exceed 35 pages - References are clearly represented and sources are correctly cited - Formulas and graphs are plainly labeled - Page number, control number are labeled according to the rules - Paper is enjoyable to read - Appropriate font for code and body - File type (PDF) <i>(10 points)</i>	2-3 formatting criteria missing  <i>(6 points)</i>	More than 3 formatting criteria missing  <i>(1 point)</i>	10/10
Feedback:				Total: 89/100

## Problem 2

<i>Criteria</i>	<b>Strong</b>	<b>Medium</b>	<b>Poor</b>	<i>Points</i>
<b>Summary Sheet: Interpretation of Contest Problem</b>	Clear background, restates the problem and specifies focus areas of the paper; easy to find and is consistent throughout the paper <i>(5 points)</i>	Mentions the problem, some goals are mentioned and consistently followed <i>(3 points)</i>	Problem not restated or hard to find  <i>(1 point)</i>	5/5
<b>Summary Sheet: Overview of Methods</b>	Indicates the methodology used, as well as their purposes in a chronological fashion; easy to understand and not too technical  <i>(10 points)</i>	Methods stated, but is unclear and difficult to understand  <i>(6 points)</i>	Methods barely or not mentioned with no explanations given  <i>(1 points)</i>	9.5/10
<b>Summary Sheet: Statement of Conclusions</b>	Important results that directly answer the problem are included without becoming too specific, possible strengths and weaknesses mentioned  <i>(10 points)</i>	Results included, but not clear and/or too technical  <i>(6 points)</i>	Few or no results, strengths and weaknesses not mentioned  <i>(1 points)</i>	8/10
<b>Solution: Assumptions/ Justifications</b>	States why assumptions are made, how to justify them, and how they might limit the model  <i>(5 points)</i>	More than 25% of the solutions section do not meet the criteria, some major assumptions are mentioned  <i>(3 points)</i>	More than 50% do not meet the criteria, major assumptions are left out  <i>(1 point)</i>	5/5
<b>Solution: Usage of Method(s)</b>	Method(s) are used correctly, efficiently, and effectively for solving the problem	Method(s) are used correctly but do not return a reasonable result or are inefficient for solving the problem	Method(s) are incorrectly utilized	9.5/10

	<b>(10 points)</b>	<b>(6 points)</b>	<b>(1 points)</b>	
<b>Solution: Explanation</b>	All variables are clearly labeled, solution has detailed, accurate, and concise mathematical explanations for each step <b>(25 points)</b>	Presentation of solution is somewhat detailed, accurate, and concise, graphs and illustrations are explained <b>(16 points)</b>	Poor labeling of variables, presentation is vague/unclear and long winded <b>(5 points)</b>	23/25
<b>Solution: Supporting Figures and Graphics*</b>	Graphs are pleasing and straightforward, using <i>enough</i> graphs to explain the model <b>(5 points)</b> *If no graphs are presented and the explanation is sufficient without graphs, the "solution: explanation" section will be worth 30 points.	Some graphs are hard to understand and/or simply unnecessary <b>(3 points)</b>	Graphs are poorly constructed <b>(1 point)</b>	4.5/5
<b>Solution: Sensitivity/ Stability</b>	Shows how the model responds to change in assumptions or parameters, thoughtfully accounts for and explains any possible errors <b>(5 points)</b>	Some analysis is present, with little to no recognition of errors <b>(3 points)</b>	Insufficient analysis, none or almost no data presented, error interpretation is non-existent <b>(1 point)</b>	4/5
<b>Solution: Strengths &amp; Weaknesses</b>	States when the model can be used, proposes strengths and weaknesses for each model in an insightful and reflective manner <b>(5 points)</b>	Some comments are not insightful or reflective <b>(3 points)</b>	Not enough strengths and/or weaknesses OR less than 50% of remarks are above par <b>(1 point)</b>	5/5
<b>Conclusion</b>	The purpose, method, and result are clearly listed for each model <b>(10 points)</b>	Summary of results is unclear, but the general idea of the group's findings is present <b>(6 points)</b>	Few or none of the requirements are present <b>(1 point)</b>	9/10

