

MTH 396 Guide to scoring

Directions: Read the following to help you decide which scores to give on the accompanying scoring sheet. If indicated, your score should be justified by a comment on the score sheet. In particular if you give a **3, 5 or 6** for some category (except RE) you need to add a comment as indicated in the corresponding comments section; otherwise you do not need to have a comment, but feel free to write something if you wish. For RE you only need a comment if you give a 5 or 6.

Making Sense

Process Dimensions	**6/ 5	4	3	*2 / 1
Making Sense of the Task <i>Interpret the concepts of the task and translate them into mathematics.</i>	The interpretation and/or translation of the task are <ul style="list-style-type: none"> thoroughly developed and/or enhanced through connections and/or extensions to other mathematical ideas or other contexts. 	The interpretation and translation of the task are <ul style="list-style-type: none"> adequately developed and adequately displayed. 	The interpretation and/or translation of the task are <ul style="list-style-type: none"> partially developed, and/or partially displayed. 	The interpretation and/or translation of the task are <ul style="list-style-type: none"> underdeveloped, sketchy, using inappropriate concepts, minimal, and/or not evident.

5/6: What is particularly thorough about how they made sense? (e.g. they used units absolutely everywhere they could and explained every computation, they explained every step and had diagrams to go with the steps, they made connections to other ideas – list them)

ANSWER THIS IN THE COMMENTS SECTION

3: What small(ish) concept did they miss? (They should have a really good start.)

ANSWER THIS IN THE COMMENTS SECTION

Representing and Solving

Process Dimensions	**6/ 5	4	3	*2 / 1
Representing and Solving the Task <i>Use models, pictures, diagrams, and/or symbols to represent and solve the task situation and select an effective strategy to solve the task.</i>	The strategy and representations used are <ul style="list-style-type: none"> elegant (insightful), complex, enhanced through comparisons to other representations and/or generalizations. 	The strategy that has been selected and applied and the representations used are <ul style="list-style-type: none"> effective and complete. 	The strategy that has been selected and applied and the representations used are <ul style="list-style-type: none"> partially effective and/or partially complete. 	The strategy selected and representations used are <ul style="list-style-type: none"> underdeveloped, sketchy, not useful, minimal, not evident, and/or in conflict with the solution/outcome.

5/6: What is particularly elegant/insightful/ or complex about their approach (e.g. they found and explained a shortcut, they used unit analysis, etc.)? or Did they generalize or compare representations?

ANSWER THIS IN THE COMMENTS SECTION

3: Their strategy should work if modified slightly or should solve most of the problem. What small modification is needed?

ANSWER THIS IN THE COMMENTS SECTION

Communicating Reasoning

Process Dimensions	**6/ 5	4	3	*2 / 1
<p>Communicating Reasoning <i>Coherently communicate mathematical reasoning and clearly use mathematical language.</i></p>	<p>The use of mathematical language and communication of the reasoning are</p> <ul style="list-style-type: none"> • elegant (insightful) and/or • enhanced with graphics or examples to allow the reader to move easily from one thought to another. 	<p>The use of mathematical language and communication of the reasoning</p> <ul style="list-style-type: none"> • follow a clear and coherent path throughout the entire work sample and • lead to a clearly identified solution/outcome. 	<p>The use of mathematical language and communication of the reasoning</p> <ul style="list-style-type: none"> • are partially displayed with significant gaps and/or • do not clearly lead to a solution/outcome. 	<p>The use of mathematical language and communication of the reasoning are</p> <ul style="list-style-type: none"> • underdeveloped, • sketchy, • inappropriate, • minimal, and/or • not evident.

5/6: What makes it elegant or insightful?

ANSWER THIS IN THE COMMENTS SECTION

Did the graphics enhance the explanation to make the whole paper easier to follow instead of just being a picture on the side? YES NO

IF YES, STATE THIS IN THE COMMENTS SECTION BY WRITING “GRAPHICS ENHANCED”

4: You should be able to answer YES to these questions:

- Could you read it and follow the work without stopping for long periods to figure out what they were doing?
- Do you know how they got their answer?
- Is their answer easy (enough) to find?

3: You should mostly follow their work, but there are a few steps that aren’t very clear. What are the steps or numbers you were wondering about? (e.g. Where did the 15 come from? Why did they multiply by 2)?

ANSWER THIS IN THE COMMENTS SECTION

Is the answer clearly stated? YES NO

IF NO, STATE THIS IN THE COMMENTS SECTION

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Accuracy

Process Dimensions	**6/ 5	4	3	*2 / 1
Accuracy <i>Support the solution/outcome.</i>	The solution/outcome is correct and enhanced by <ul style="list-style-type: none"> • extensions, • connections, • generalizations, and/or • asking new questions leading to new problems. 	The solution/outcome given is <ul style="list-style-type: none"> • correct, • mathematically justified, and • supported by the work. 	The solution/outcome given is <ul style="list-style-type: none"> • incorrect due to minor error(s), or • a correct answer but work contains minor error(s) • partially complete, and/or • partially correct 	The solution/outcome given is <ul style="list-style-type: none"> • incorrect and/or • incomplete, or • correct, but <ul style="list-style-type: none"> ○ conflicts with the work, or ○ not supported by the work.

5/6: What extension, connection, generalization, or new question did they give?

ANSWER THIS IN THE COMMENTS SECTION

4: They get the correct answer and it is supported by the work shown and with a good strategy. (e.g. they got the correct answer by demonstrated skill, not luck)

3: Their answer would be right if they did just one more small step or if they fixed a small error – what is the “quick fix”?

ANSWER THIS IN THE COMMENTS SECTION

Reflecting and Evaluating

Process Dimensions	**6/ 5	4	3	*2 / 1
Reflecting and Evaluating <i>State the solution/outcome in the context of the task.</i> <i>Defend the process, evaluate and interpret the reasonableness of the solution/outcome.</i>	Justifying the solution/outcome completely, the student reflection also includes <ul style="list-style-type: none"> • reworking the task using a different method, • evaluating the relative effectiveness and/or efficiency of different approaches taken, and/or • providing evidence of considering other possible solution/outcomes and/or interpretations. 	The solution/outcome is stated within the context of the task, and the reflection justifies the solution/outcome completely by reviewing <ul style="list-style-type: none"> • the interpretation of the task • concepts, • strategies, • calculations, and • reasonableness. 	The solution/outcome is not stated clearly within the context of the task, and/or the reflection only partially justifies the solution/outcome by reviewing <ul style="list-style-type: none"> • the task situation, • concepts, • strategies, • calculations, and/or • reasonableness. 	The solution/outcome is not clearly identified and/or the justification is <ul style="list-style-type: none"> • underdeveloped, • sketchy, • ineffective, • minimal, • not evident, and/or • inappropriate.

5/6: Justify by telling which bullets they satisfied and why

ANSWER THIS IN THE COMMENTS SECTION

4: They wrote the answer in a complete sentence or at least with units (e.g. 100 pieces of candy) AND they checked all of their work.

3: The reviewed at least some of their work a second time.

2: They at least stated the answer in a complete sentence.