## Holistic Rubric for 3-Point Modeling Items

<table>
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<th>Points</th>
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| 3 Points | A three-point response provides full and complete evidence of the modeling process used to solve a real-world problem.  

The response:  
- identifies the problem that needs to be solved; AND/OR  
- determines information that is needed to solve the problem; AND/OR  
- communicates an accurate, organized solution path that is aligned to the problem using appropriate, effective, and precise representations; AND/OR  
- evaluates or validates a partial or complete solution to the real-world situation and shows how to improve or refine the problem solution. |
| 2 Points | A two-point response provides partial evidence of the modeling process used to solve a real-world problem.  

The response:  
- partially identifies the problem that needs to be solved; AND/OR  
- determines some of the information that is needed to solve the problem; AND/OR  
- includes a partial solution path that may be incomplete, or contains some errors in identifying the mathematics that is needed to solve the problem; AND/OR  
- evaluates or validates a partial or complete solution to the real-world situation and attempts to improve or refine the problem solution. |
| 1 point | A one-point response provides limited evidence of the modeling process used to solve a real-world problem.  

The response:  
- partially or incorrectly identifies the problem that needs to be solved; AND/OR  
- determines a minimal amount of the information that is needed to solve the problem; AND/OR  
- includes an incomplete or unorganized solution path, or contains errors in identifying the mathematics that is needed to solve the problem; AND/OR  
- evaluates or validates a partial or complete solution to the real-world situation but does not show the ability to improve or refine the problem solution. |
| 0 Point | A zero-point response is completely incorrect, incoherent and/or irrelevant. |
# Holistic Rubric for 4-Point Modeling Items

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| 4 Points | A four-point response provides full and complete evidence of the modeling process used to solve a real-world problem.  
  The response:  
  • identifies the problem that needs to be solved; AND/OR  
  • determines information that is needed to solve the problem; AND/OR  
  • communicates an accurate, organized solution path that is aligned to the problem using appropriate, effective, and precise representations; AND/OR  
  • evaluates or validates a partial or complete solution to the real-world situation and shows how to improve or refine the problem solution. |
| 3 Points | A three-point response provides slightly flawed evidence of the modeling process used to solve a real-world problem.  
  The response:  
  • identifies most of the problem that needs to be solved; AND/OR  
  • determines most of the information that is needed to solve the problem; AND/OR  
  • communicates an accurate, organized solution path that is aligned to the problem using appropriate, effective, and precise representations with minor flaws; AND/OR  
  • evaluates or validates a partial or complete solution to the real-world situation and shows how to improve or refine the problem solution, but the improvement or refinement may include minor flaws. |
| 2 Points | A two-point response provides partial evidence of the modeling process used to solve a real-world problem.  
  The response:  
  • partially identifies the problem that needs to be solved; AND/OR  
  • determines some of the information that is needed to solve the problem; AND/OR  
  • includes a partial solution path that may be incomplete, or contains some errors in identifying the mathematics that is needed to solve the problem; AND/OR  
  • evaluates or validates a partial or complete solution to the real-world situation and attempts to improve or refine the problem solution. |
| 1 point | A one-point response provides limited evidence of the modeling process used to solve a real-world problem.  
  The response:  
  • partially or incorrectly identifies the problem that needs to be solved; AND/OR  
  • determines a minimal amount of the information that is needed to solve the problem; AND/OR  
  • includes an incomplete or unorganized solution path, or contains errors in identifying the mathematics that is needed to solve the problem; AND/OR  
  • evaluates or validates a partial or complete solution to the real-world situation but does not show the ability to improve or refine the problem solution. |
| 0 Point | A zero-point response is completely incorrect, incoherent and/or irrelevant. |