

Task Rubric – Lifeguard Procedures Report

Expectations*	Criteria	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding					
The student:					
1	– effectively uses a mathematical model (e.g., states simplifying assumptions, forms derivatives, solves resulting equations)	– uses a mathematical model with limited effectiveness	– uses a mathematical model with some effectiveness	– uses a mathematical model with considerable effectiveness	– uses a mathematical model with a high degree of effectiveness
Thinking					
The student:					
2	– effectively interprets the solutions to the equations within the given pool context	– interprets the solutions to the equations with limited effectiveness	– interprets the solutions to the equations with some effectiveness	– interprets the solutions to the equations with considerable effectiveness	– interprets the solutions to the equations with a high degree of effectiveness
3	– effectively formulates and tests hypotheses (e.g., predicts the best route for the lifeguard and presents convincing arguments to confirm or refute the prediction)	– formulates and tests hypotheses with limited effectiveness	– formulates and tests hypotheses with some effectiveness	– formulates and tests hypotheses with considerable effectiveness	– formulates and tests hypotheses with a high degree of effectiveness

(continued)

Expectations*	Criteria	Level 1	Level 2	Level 3	Level 4
Communication					
The student:					
4	– clearly communicates information in diagrams or graphs (e.g., labels fully, defines variables)	– communicates information in diagrams or graphs with limited clarity	– communicates information in diagrams or graphs with some clarity	– communicates information in diagrams or graphs with considerable clarity	– communicates information in diagrams or graphs with a high degree of clarity
4	– effectively integrates text and mathematical forms	– integrates text and mathematical forms with limited effectiveness	– integrates text and mathematical forms with some effectiveness	– integrates text and mathematical forms with considerable effectiveness	– integrates text and mathematical forms with a high degree of effectiveness
Application					
The student:					
5	– effectively uses formulas (i.e., chooses appropriate formulas, substitutes appropriate values from the scenarios)	– uses formulas with limited effectiveness	– uses formulas with some effectiveness	– uses formulas with considerable effectiveness	– uses formulas with a high degree of effectiveness
6	– effectively recommends and justifies a course of action based on the solutions to the equations	– recommends and justifies a course of action with limited effectiveness	– recommends and justifies a course of action with some effectiveness	– recommends and justifies a course of action with considerable effectiveness	– recommends and justifies a course of action with a high degree of effectiveness

*The expectations that correspond to the numbers given in this chart are listed on page 8.

Note: A student whose overall achievement at the end of a course is below level 1 (that is, below 50%) will not obtain a credit for the course.