Name: _____ Date: _____

BLM 9.CP.1

Chapter 9 Problem Wrap-Up Rubric

Category	Level 1	Level 2	Level 3	Level 4
Knowledge/ Understanding	• demonstrates limited knowledge of the relationship between surface area and volume and of the concept of optimization	• demonstrates some knowledge of the relationship between surface area and volume and of the concept of optimization	• demonstrates considerable knowledge of the relationship between surface area and volume and of the concept of optimization	• demonstrates a thorough knowledge of the relationship between surface area and volume and of the concept of optimization
Thinking	• uses planning and critical-thinking processes with limited effectiveness	• uses planning and critical-thinking processes with some effectiveness	• uses planning and critical-thinking processes with considerable effectiveness (e.g., breaks problem into parts, selects formulas, performs calculations, draws conclusions, checking them for appropriateness)	• uses planning and critical-thinking processes with a high degree of effectiveness
Communication	• expresses and organizes mathematical thinking with limited effectiveness • uses mathematical vocabulary, diagrams, and notation with limited effectiveness	• expresses and organizes mathematical thinking with some effectiveness • uses mathematical vocabulary, diagrams, and notation with some effectiveness	• expresses and organizes mathematical thinking with considerable effectiveness • uses mathematical vocabulary, diagrams, and notation with considerable effectiveness (e.g., expresses solutions in an organized manner)	• expresses and organizes mathematical thinking with a high degree of effectiveness • uses mathematical vocabulary, diagrams, and notation with a high degree of effectiveness (e.g., expresses solutions in a clear and detailed manner)
Application	• applies knowledge of measurement and optimization formulas to this context with limited effectiveness	• applies knowledge of measurement and optimization formulas to this context with some effectiveness	• applies knowledge of measurement and optimization formulas to this context with considerable effectiveness	• applies knowledge of measurement and optimization formulas to this context with a high degree of effectiveness