

Task: The Ice Rink Rubric

Category	Level 1	Level 2	Level 3	Level 4
Knowledge/ Understanding	<ul style="list-style-type: none"> demonstrates limited knowledge and understanding of the relationship between perimeter and area, and of the concept of optimization 	<ul style="list-style-type: none"> demonstrates some knowledge and understanding of the relationship between perimeter and area, and of the concept of optimization 	<ul style="list-style-type: none"> demonstrates considerable knowledge and understanding of the relationship between perimeter and area, and of the concept of optimization 	<ul style="list-style-type: none"> demonstrates thorough knowledge and understanding of the relationship between perimeter and area, and of the concept of optimization
Thinking	<ul style="list-style-type: none"> uses limited planning skills (e.g., guesses) uses processing skills with limited effectiveness (e.g., provides limited reasoning or justification) uses critical-thinking processes with limited effectiveness [e.g., is unable to attempt to solve parts d) and e)] 	<ul style="list-style-type: none"> uses some planning skills (e.g., provides some evidence of a plan) uses processing skills with some effectiveness (e.g., provides some evidence of reasoning or justification) uses critical-thinking processes with some effectiveness [e.g., makes some attempt to solve parts d) and e)] 	<ul style="list-style-type: none"> uses considerable planning skills (e.g., provides considerable evidence of a plan) uses processing skills with considerable effectiveness (e.g., provides considerable evidence of reasoning or justification) uses critical-thinking processes with considerable effectiveness [e.g., creates an appropriate process for solving parts d) and e)] 	<ul style="list-style-type: none"> uses planning skills with a high degree of effectiveness (e.g., provides detailed evidence of plans) uses processing skills effectively (e.g., provides detailed evidence of reasoning or justification) uses critical-thinking processes with a high degree of effectiveness [e.g., creates a clear effective process for solving parts d) and e)]
Communication	<ul style="list-style-type: none"> prepares a simple report making a few reasonable statements with some assistance infrequently uses some mathematical symbols and vocabulary correctly explanations and justifications are partially understandable (e.g., gives a partial chart or incorrect equations, or little or no responses) 	<ul style="list-style-type: none"> prepares a report making some reasonable statements with limited assistance uses correct mathematical symbols and vocabulary some of the time explanations and justifications are partially understandable (e.g., gives a chart or partial equations, makes some accurate responses) 	<ul style="list-style-type: none"> prepares a report making reasonable statements without assistance uses correct mathematical symbols and vocabulary with few minor errors explanations and justifications are clear (e.g., gives a correct chart or equations, makes mostly accurate responses.) 	<ul style="list-style-type: none"> prepares a complete, detailed, insightful report uses mathematical symbols and vocabulary correctly and creatively explanations and justifications are particularly clear and detailed (e.g., gives a complete chart or correct equations, makes accurate responses for all parts, provides evidence of all possible rectangular configurations)
Application	<ul style="list-style-type: none"> applies knowledge and skills in familiar contexts (e.g., finding dimensions) with limited effectiveness transfers knowledge of skills to new context (e.g., using only integer lengths) with limited effectiveness 	<ul style="list-style-type: none"> applies knowledge and skills in familiar contexts (e.g., finding dimensions) with some effectiveness transfers knowledge of skills to new context (e.g., using only integer lengths) with some effectiveness 	<ul style="list-style-type: none"> applies knowledge and skills in familiar contexts (e.g., finding dimensions) with considerable effectiveness transfers knowledge of skills to new context (e.g., using only integer lengths) with considerable effectiveness 	<ul style="list-style-type: none"> applies knowledge and skills in familiar contexts (e.g., finding dimensions) with a high degree of effectiveness transfers knowledge of skills to new context (e.g., using only integer lengths) with a high degree of effectiveness