Name: _____ Date: _____

Chapter 1 Task: Laser Beams Rubric

BLM 1–13

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding • Solves for the point(s) of intersection of each linear-quadratic system • Determines the point of intersection of two linear functions • Determines the height of each light source • Graphs the quadratic function	• Demonstrates limited understanding of how to solve for the point(s) of intersection of a linear-quadratic system, how to determine the point of intersection of two linear functions, how to determine the height of each light source, and how to graph a quadratic function	• Demonstrates some understanding of how to solve for the points of intersection of a linear-quadratic system, how to determine the point of intersection of two linear functions, how to determine the height of each light source, and how to graph a quadratic function	• Demonstrates considerable understanding of how to solve for the points of intersection of a linear-quadratic system, how to determine the point of intersection of two linear functions, how to determine the height of each light source, and how to graph a quadratic function	• Demonstrates thorough understanding of how to solve for the points of intersection of a linear-quadratic system, how to determine the point of intersection of two linear functions, how to determine the height of each light source, and how to graph a quadratic function
Thinking • Prepares a plan to solve the problem • Carries out the plan	• Needs extensive assistance to organize a plan and needs some steps to follow	• Needs some assistance to organize and implement an effective strategy	• Needs minimal assistance to organize and implement an effective strategy	• Needs no assistance to organize and implement an effective strategy
Communication • Provides clear explanations and justifications • Correctly uses mathematical language • Clearly labels graph	• Does not clearly explain or justify solution • Uses limited mathematical form • Uses limited labelling on graph	• Explains or justifies the solution somewhat • Uses minimal mathematical form • Uses some labelling on graph	• Explains or justifies the solution fully • Uses good mathematical form • Graph is well-labelled	• Explains, justifies, and shows insight into the complexities of the solution • Uses excellent mathematical form • Graph is fully and clearly labelled
Application • Recognizes the common property • Discusses which beam does not share the common property • Determines the required equations	• Interprets information ineffectually • Minimally discusses the common property • Determines unreasonable equations	• Interprets information somewhat effectually • Discusses somewhat the common property • Determines somewhat reasonable equations	• Interprets information with considerable effectiveness • Discusses the common property with considerable understanding • Determines reasonable equations	• Interprets information with a high degree of effectiveness • Thoroughly discusses the common property • Determines reasonable equations supported with justification

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