

## MSA Mathematics ECR Rubric Grades 5 through 8

### **3 The response demonstrates a comprehensive understanding and analysis of a problem.**

- Application of a reasonable strategy in the context of the problem is indicated.
- Explanation<sup>1</sup> of and/or justification<sup>2</sup> for the mathematical process(es) used to solve a problem is clear, fully developed, and logical.
- Connections and/or extensions made within mathematics or outside of mathematics are clear and stated explicitly.
- Supportive information and/or numbers are provided as appropriate.<sup>3</sup>

### **2 The response demonstrates a general understanding and analysis of a problem.**

- Application of a reasonable strategy in the context of the problem is indicated.
- Explanation<sup>1</sup> of and/or justification<sup>2</sup> for the mathematical process(es) used to solve a problem is feasible, but may be only partially developed.
- Connections and/or extensions made within mathematics or outside of mathematics are partial or overly general, or may be implied.
- Supportive information and/or numbers are provided as appropriate.<sup>3</sup>

### **1 The response demonstrates a minimal understanding and analysis of a problem.**

- Partial application of a strategy in the context of the problem is indicated.
- Explanation<sup>1</sup> of and/or justification<sup>2</sup> for the mathematical process(es) used to solve a problem is logically flawed or missing.
- Connections and/or extensions made within mathematics or outside of mathematics are flawed or missing.
- Supportive information and/or numbers may or may not be provided as appropriate.<sup>3</sup>

### **0 The response is completely incorrect, irrelevant to the problem, or missing.<sup>4</sup>**

#### **Notes:**

<sup>1</sup> **Explanation** refers to students' ability to communicate **how** they arrived at the solution for an item using the language of mathematics.

<sup>2</sup> **Justification** refers to students' ability to support the reasoning used to solve a problem, or to demonstrate **why** the solution is correct using mathematical concepts and principles.

<sup>3</sup> Students need to complete rubric criteria for **explanation, justification, connections** and/or **extensions** as cued for in a given problem.

<sup>4</sup> Merely an exact copy or paraphrase of the problem will receive a score of "0".