

Rubrics For Scoring Open-Ended Items

Scoring rubrics will be used to score open-ended student responses on the Fourth Generation CMT. The number of points available for each item will depend on the type of question that is asked and the type of response that is required of students. These open-ended items will not be machine scored. There are three types of rubrics:

- 0-1 point rubric is used for responses that are correct (1 point) or incorrect (0 point)
- 0-2 point rubric is used where a complete response will be scored as a 2, a partial response will be scored as a 1, and an incorrect response will be scored as a 0
- 0-3 point rubric is only used for strand 25, Integrated Understanding questions. A response demonstrating full and complete understanding will be scored as a 3. A response demonstrating a reasonable understanding will be scored as a 2. A response demonstrating a partial understanding will be scored as a 1. A response demonstrating merely an acquaintance will be scored as a 0.

A detailed description of each rubric and score point is contained on pages 25-27.

Rubric for Scoring 1-Point Extended-Task (Dichotomous) Mathematics Items

Score Point 1

In an appropriate response, the student has demonstrated a **full and complete** understanding of all concepts and processes embodied in this application. The student has addressed the task in a mathematically sound manner. The response contains evidence of the student's competence in problem solving and reasoning, computing and estimating, and communicating to the full extent that these processes apply to the specified task. The response may, however, contain minor arithmetic errors that do not detract from a demonstration of full understanding.

Score Point 0

The student has **not demonstrated** a complete understanding of all concepts and processes embodied in this application.

Rubric for Scoring 2-Point Extended-Task Mathematics Items

Score Point 2

In an appropriate response, the student has demonstrated a **full and complete** understanding of all concepts and processes embodied in this application. The student has addressed the task in a mathematically sound manner. The response contains evidence of the student's competence in problem solving and reasoning, computing and estimating, and communicating to the full extent that these processes apply to the specified task. The response may, however, contain minor arithmetic errors that do not detract from a demonstration of full understanding.

Score Point 1

The student has demonstrated a **partial** understanding of some of the concepts and processes embodied in this application. The student's response contains some of the attributes of an appropriate response but lacks convincing evidence that the student fully comprehends the essential mathematical ideas addressed by this task. Such deficits include evidence of insufficient mathematical knowledge; errors in fundamental mathematical procedures; and other omissions or anomalies that bring into question the extent of the student's ability to solve problems of this general type.

Score Point 0

The student has demonstrated **merely an acquaintance** with the topic. The student's response is associated with the task in the item, but contains few attributes of an appropriate response. There are significant omissions or anomalies that indicate a basic lack of comprehension in regard to the mathematical ideas and procedures necessary to adequately address the specified task. No evidence is present to suggest that the student has the ability to solve problems of this general type.

Rubric for Scoring 3-Point Extended-Task Mathematics Items (Strand 25 Only)

Score Point 3

In an appropriate response, the student has demonstrated a **full and complete** understanding of all concepts and processes embodied in this application. The student has addressed the task in a mathematically sound manner. The response contains evidence of the student's competence in problem solving and reasoning, computing and estimating, and communicating to the full extent that these processes apply to the specified task. The response may, however, contain minor arithmetic errors that do not detract from a demonstration of full understanding.

Score Point 2

The student has demonstrated a **reasonable** understanding of the essential mathematical concepts and processes embodied in this application. The student's response contains most of the attributes of an appropriate response, including a mathematically sound approach and evidence of competence with applicable mathematical processes, but contains flaws that do not diminish countervailing evidence that the student comprehends the essential mathematical ideas addressed by this task. Such flaws include errors ascribable to faulty reading, writing or drawing skills; errors ascribable to insufficient, nonmathematical knowledge; and errors ascribable to negligent or inattentive execution of mathematical ideas or algorithms.

Score Point 1

The student has demonstrated a **partial** understanding of some of the concepts and processes embodied in this application. The student's response contains some of the attributes of an appropriate response but lacks convincing evidence that the student fully comprehends the essential mathematical ideas addressed by this task. Such deficits include evidence of insufficient mathematical knowledge; errors in fundamental mathematical procedures; and other omissions or anomalies that bring into question the extent of the student's ability to solve problems of this general type.

Score Point 0

The student has demonstrated **merely an acquaintance** with the topic. The student's response is associated with the task in the item, but contains few attributes of an appropriate response. There are significant omissions or anomalies that indicate a basic lack of comprehension in regard to the mathematical ideas and procedures necessary to adequately address the specified task. No evidence is present to suggest that the student has the ability to solve problems of this general type.

Grade Levels 3, 4, 5, 6, 7 and 8

Test Blueprint

Blueprints indicate the number and type of question for each strand tested.

Test Content

Test content outlines the specific content covered for each strand tested.

Sample Items

Sample items illustrate some of the questions used to test content skills and concepts. There is at least one sample item per strand. If a strand is tested with an open-ended question, an open-ended item with scored student work is provided. In some cases there are additional open-ended items without scored student work. Items have been coded MC for Multiple Choice and OE for Open Ended.

Vocabulary Lists

Vocabulary lists represent the mathematics terms and language with which teachers and students at a particular grade level should be familiar.