

Mathematics Scoring Rubric – Problem-Solving (M4)

Problem-Solving: Understands problem/task, plan/strategy, computation/solution

4	<p>The student:</p> <ul style="list-style-type: none"> • shows complete understanding of the problem • identifies, relates, and uses all important components of the problem • performs computations completely and correctly but may make one minor error (computation, transposition¹, or transcription²) • uses an appropriate strategy that should lead to a correct solution
3	<p>The student:</p> <ul style="list-style-type: none"> • shows understanding of the problem • identifies, relates, and uses most of the important components of the problem • performs computations that are generally correct but may make some minor errors (computation, transposition¹, or transcription²) • uses an appropriate strategy that should lead to a reasonable solution
2	<p>The student:</p> <ul style="list-style-type: none"> • shows some understanding of the problem • identifies, relates, and uses some important components of the problem • performs computations that contain major computational errors • shows some evidence of a strategy to solve the problem
1	<p>The student:</p> <ul style="list-style-type: none"> • shows limited to no understanding of the problem • fails to identify, relate, or use important components of the problem • uses an inappropriate strategy for solving the problem • places too much emphasis on unrelated components of the problem • attempts an answer
B	<ul style="list-style-type: none"> • Blank (no attempt or completely erased answer)
A	<ul style="list-style-type: none"> • Correct answer only (no work shown)
I	<ul style="list-style-type: none"> • Incorrect answer only (no work shown)

1 Transposition: change the usual order of letters, words, or numbers
(e.g., 35/53, triangle/traingle)

2 Transcription: copying from one form of recorded documentation to another
(e.g., human error indicating 55 when you meant 44)

Mathematics Scoring Rubric – Communication (M4)

Communication: Explanation, math terminology/notation, and details
(e.g., use of graphs, tables, charts, figures, diagrams, numbers, symbols)

C4	<p>The student:</p> <ul style="list-style-type: none"> • communicates a solution that is complete, logical, well- organized, and related to the problem using words, pictures, and/or symbols • makes explicit the strategy, computations, and ideas • uses math terminology and/or notation that is appropriate and accurate
C3	<p>The student:</p> <ul style="list-style-type: none"> • communicates a solution that is reasonable and organized using words, pictures and/or symbols • provides a solution where the strategy, some computations and/or some ideas have to be inferred • uses math terminology and/or notation that is appropriate, but may have minor errors in notation
C2	<p>The student:</p> <ul style="list-style-type: none"> • communicates a solution that is poorly organized/hard to follow using words, pictures and/or symbols • provides a solution where much of the strategy, many computations, and/or many ideas have to be inferred • uses math terminology and/or notation incorrectly
C1	<p>The student:</p> <ul style="list-style-type: none"> • Communicates a minimal solution using words, pictures and/or symbols • provides a solution where the strategy, computation and/or idea cannot be inferred • does not use math terminology and/or notation
CB	<ul style="list-style-type: none"> • Blank (no attempt or completely erased answer)
CA	<ul style="list-style-type: none"> • Correct answer only (no work shown)
CI	<ul style="list-style-type: none"> • Incorrect answer only (no work shown)

Note: Students may be able to demonstrate solid communication of their mathematical thinking even though their answer may not reflect a correct understanding of the problem.