

MATH RUBRIC - THIRD GRADE

6 - EXCEPTIONAL

- **Complete understanding** of problem - identifies important elements of problem, includes correct answer
- **Demonstrates exceptional thinking** by using clear diagrams, tables, charts, graphs, etc.
- Shows and explains **multiple strategies**
- **Excellent explanation**; communicates ideas to others in a well written, clear manner
- **Exceptional** use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates exceptional understanding of the problem
- **Unusual insight** - Shows and explains more than problem asks

5 - STRONG

- **Good understanding** of problem including correct answer
- **Demonstrates thinking** with one or more of the following: diagram, table, chart, graph, etc.
- **May** have more than **one strategy**
- **Clear explanation**; articulates concepts to others in a well written manner
- Appropriate use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates good understanding of the relationship between concrete models and mathematics symbols

4 - CAPABLE

- **Understands most** of the problem
- Work is adequately organized and presented using a diagram, table, chart, or graph, etc.
- May have more than one strategy
- **Explanation** of concept is understandable with possible **minor flaws**
(A minor flaw is a simple student error that doesn't require reteaching)
- **Evidence** of use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates understanding of the problem; may or may not include the correct answer
- Includes written narrative

3 - DEVELOPING

- **Some understanding** of problem but **overlooks** less important details
- **Begins** in a reasonable way, but **doesn't finish or leaves out** important parts of solution; sometimes inconsistent
- **One** strategy
- **Explanation** has **some confusion**, is unclear, or unfinished; may or may not include written narrative
- Some use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates some understanding of the problem; may or may not include correct answer

2 - LIMITED

- **Understands only bits and pieces** of problem
- Begins, but fails to complete problem
- Doesn't approach problem in an organized manner; incorrect format, one **vague** strategy
- **Explanation** is **unfinished** and / or **confusing**
- Limited use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates limited understanding of the problem

1 - EMERGENT

- **Attempts**, but demonstrates **no understanding** of problem
- Some or no organization of thoughts; unable to generate any strategies
- **No solution, or incorrect** solution
- No evidence of, or confusing use of "math tools"
- Inappropriate computation

0- No Response, Inappropriate Response

- **No attempt**
- **Response does not fit** that given problem/task

MATH RUBRIC - THIRD GRADE

6 - EXCEPTIONAL

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- Computation demonstrates exceptional understanding of the problem
- **Unusual insight** - Shows and explains more than problem asks

Commentary on Student Samples

Rubric 6, Paper A

This paper shows a clear understanding of the problem and includes the correct answer. The student used a parts and total chart in addition to written equations as multiple strategies for arriving at the correct answer. Detailed explanation supports clear thinking from beginning to end. Unusual insight is demonstrated by the student's precise math language: "When you do $\frac{1}{3}$, the denominator always shows how many equal parts there are."

Rubric 6, Paper B

Clear understanding of this problem, including the correct answer, and demonstrates multiple strategies that included a picture number sentence, parenthetical expressions and written number equations. Unusual insight is shown in the correct use of the parenthetical expressions. This anchor included two written explanations; captions and paragraph detailing the mathematical process used. Although the phrase "3 to 24" is not precise math language, the symbolic notation demonstrates clear understanding of the division process.

Rubric 6, Paper C

Clear understanding of this problem is demonstrated using multiple strategies including charts, parenthetical expressions and concise written explanation. Symbolic representation integrates numerals, symbols and sequential mathematical operations.

MATH RUBRIC - THIRD GRADE

5 - STRONG

- **Good understanding** of problem including correct answer
- **Demonstrates thinking** with one or more of the following: diagram, table, chart, graph, etc.
- **May** have more than **one strategy**
- **Clear explanation;** articulates concepts to others in a well written manner
- Appropriate use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates good understanding of the relationship between concrete models and mathematics symbols

Commentary on Student Samples

Rubric 5, Paper A

This response shows good understanding of the problem, including the correct answer. Although the math number models are not written separately, they are embedded in the written commentary and explain the student's thinking. The statement, "So I asked myself what $x \times 3$ equals 24. I came up with 8." demonstrates an understanding of the integration of math concepts.

Rubric 5, Paper B

This paper demonstrates a solid understanding of the problem, including the correct answer. The written explanation although simple, is clear and complete. The student uses a variety of appropriate computation.

MATH RUBRIC - THIRD GRADE

4 - CAPABLE

- **Understands most** of the problem
- Work is adequately organized and presented using a diagram, table, chart, or graph, etc.
- May have more than one strategy
- **Explanation** of concept is understandable with possible **minor flaws**
- **Evidence** of use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates understanding of the problem; may or may not include the correct answer
- Includes written narrative

Commentary on Student Samples

Rubric 4, Paper A

This student clearly understands the problem and uses appropriate math strategies in arriving at a solution. The written explanation is concise and accurate. Charts and diagrams demonstrate multiple strategies. All computation is correct with the exception of the final addition problem ($6 + 8 + 24 = 33$). This minor flaw in computation makes this paper a 4.

Rubric 4, Paper B

The student clearly understands the problem. Written mathematical equations and charts demonstrate the student's thinking. Although the correct answer is included, the written explanation does not support the mathematical computation because it does not include how the 8 was computed. The use of parenthesis is inappropriate.

MATH RUBRIC - THIRD GRADE

3 - DEVELOPING

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- Computation demonstrates some understanding of the problem; may or may not include correct answer

Commentary on Student Samples

Rubric 3, Paper A

This paper shows a basic understanding of the problem, yet doesn't demonstrate the ability to identify fractional parts of a group. This is more than a minor flaw because this shows a lack of conceptual understanding, as opposed to just a computational error. Therefore this paper is a Rubric 3.

Rubric 3, Paper B

This paper shows an understanding of the problem. The student shows the problem with tally marks, but shows 6×4 rather than 4×6 . In the final step, the student has neglected to add the original 6 stamps. The written explanation overlooks details and leaves out important parts of the solution.

Rubric 3, Paper C

This paper shows a beginning understanding of the problem, but the student becomes confused as he progresses. Also, the student does not demonstrate an understanding of fractions.

MATH RUBRIC - THIRD GRADE

2- LIMITED

- **Understands** only **bits and pieces** of problem
- Begins but fails to complete problem
- Doesn't approach problem in an organized manner; incorrect format; one **vague** strategy
- **Explanation** is **unfinished** and / or **confusing**
- Limited use of "math tools" (multiple strategies, techniques, variety of computation, or math language)
- Computation demonstrates limited understanding of the problem

Commentary on Student Samples

Rubric 2, Sample A

This student understands bits and pieces of the problem. He finds all the numbers to work with in the problem, yet applies them to the solution incorrectly.

Rubric 2, Sample B

This paper demonstrates that the student understands a variety of techniques, however is unable to match the appropriate technique to find the solution. The student's computation reveals a limited understanding of the problem.

MATH RUBRIC - THIRD GRADE

1 - EMERGENT

- **Attempts**, but demonstrates **no understanding** of problem
- Some or no organization of thoughts; unable to generate any strategies
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Commentary on Student Samples

Rubric 1, Sample A

An attempt was made to solve the problem. There is little evidence of the ability to generate any appropriate math strategies. This attempt is emergent based upon the pie graphs and random number sentences equal to 12.

Rubric 1, Sample B

This paper shows an attempt to solve the problem with rectangular drawings. However, mathematical strategies are missing and an incorrect solution of 764 is given.

MATH RUBRIC - THIRD GRADE

0 - No Response, Inappropriate Response

- **No attempt**
- **Response does not fit** the given problem/task

Commentary on Student Samples

Rubric 0, Sample A

This student makes no attempt to solve the problem.