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| **NC.3.OA.3**  **Counting Goldfish** | |
| **Domain** | Operations and Algebraic Thinking |
| **Cluster** | Represent and solve problems involving multiplication and division. |
| **Standard(s)** | **NC.3.OA.3** Represent, interpret, and solve one-step problems involving multiplication and division.   * Solve multiplication word problems with factors up to and including 10. Represent the problem using arrays, pictures, and/or equations with a symbol for the unknown number to represent the problem. * Solve division word problems with a divisor and quotient up to and including 10. Represent the problem using arrays, pictures, repeated subtraction and/or equations with a symbol for the unknown number to represent the problem. |
| **Materials** | Paper, pencils, counters or square tiles  Optional: White boards and dry-erase markers |
| **Task** | 5 teachers have fish tanks in their classroom. Each teacher receives an equal number of tropical fish to put in his/her fish tank. Each teacher also receives 6 goldfish.  If there are between 34 and 56 fish in the school, how many tropical fish could there be? Use your counters or square tiles to model the problem. Find at least 3 possible answers and write an equation for each solution.  Write a sentence to explain how you solved the task. |

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| **Rubric** | | |
| **Level I**  Not Yet | 1. **Level II** 2. Progressing | **Level III**  Meets Expectation |
| * Incorrect answer and work are given. | * Finds the correct answer, but there may be inaccuracies or incomplete justification of solution **OR** * Uses partially correct work but does not have a correct solution. | * Accurately finds the answers: There could be as few as 1 or as many as 5 tropical fish. **AND** * Writes correct equation for each part of the task   **AND**   * The sentence clearly and accurately describes student’s strategies. |

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| **Standards for Mathematical Practice** |
| **1**. **Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| 3. Constructs viable arguments and critiques the reasoning of others. |
| **4. Models with mathematics.** |
| 5. Uses appropriate tools strategically. |
| **6. Attends to precision.** |
| **7. Looks for and makes use of structure.** |
| 8. Looks for and expresses regularity in repeated reasoning. |

**Counting Goldfish**

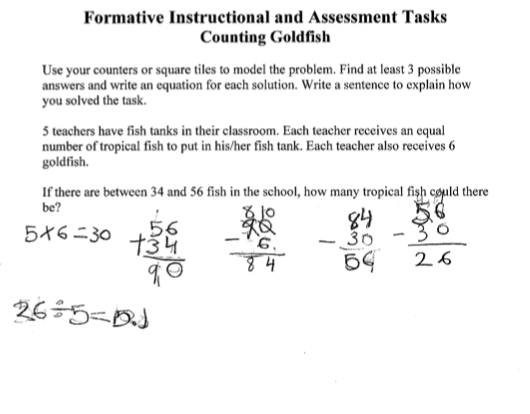
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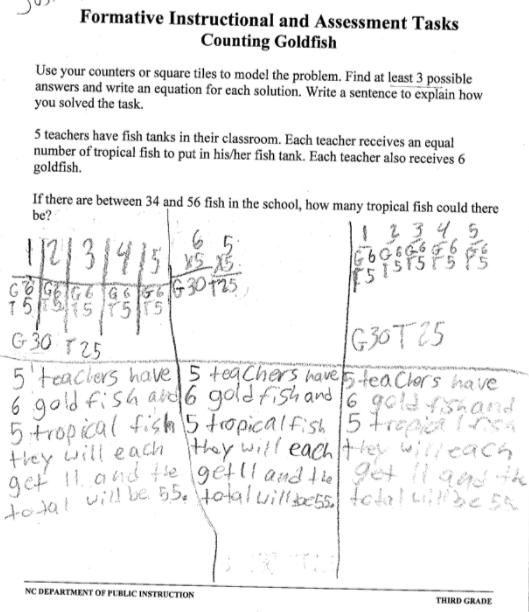
If there are between 34 and 56 fish in the school, how many tropical fish could there be?

**Scoring Examples**

**Not Yet:**The student answer is incorrect and the work does not lead to a correct answer. The student’s work shows evidence of beginning to make sense of the context (5x6). The work that follows reveals confusion with the operation being used in this problem.



**Progressing:**The student was able to come up one correct solution. The student was not able to find 2 other possible answers. The student showed a picture as a strategy that clearly communicated thinking.



**Meets Expectations:**The student was able to accurately find two possible answers and was able to support the answers with equations and a written explanation that was clear.

