|  |  |
| --- | --- |
| **NC.3.OA.1**  **Ants!** | |
| **Domain** | Operations and Algebraic Thinking |
| **Cluster** | Represent and solve problems involving multiplication and division. |
| **Standard(s)** | **NC.3.OA.1** For products of whole numbers with two factors up to and including 10:   * Interpret the factors as representing the number of equal groups and the number of objects in each group. * Illustrate and explain strategies including arrays, repeated addition, decomposing a factor, and applying the commutative and associative properties. |
| **Materials** | Activity sheet, pencils, white boards and dry-erase markers (optional) |
| **Task** | **Part 1:** Nathan’s mom has ants in her house. Ants have 6 legs. How many ants could there have been if she saw between 35 and 50 legs?  **Part 2:** Make a model with manipulatives or by drawing to show how you get each solution. Write a sentence explaining your thinking. |

|  |  |  |
| --- | --- | --- |
| **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 (6, 7 or 8 ants). **AND** * Uses an appropriate model to represent and justify the solution. **AND** * Writes a clear and accurate sentence explaining their strategies. |

|  |
| --- |
| **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. |

**Ants!**

Draw a picture and write an equation for each part of the task.

**Part 1:** Nathan’s mom has ants in her house. Ants have 6 legs. How many ants could there have been if she saw between 35 and 50 legs?

**Part 2:** Make a model with manipulatives or by drawing to show how you get each solution. Write a sentence explaining how you know that your answers are correct.