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| **Field Day Groups– 6.NS.4** |
| **Domain** | **The Number System** |
| **Cluster** | **Compute fluently with whole numbers and find common factors and multiples.** |
| **Standard(s)** | **6.NS.4** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2). |
| **Materials** | Activity sheet |
| **Task** | **Field Day Groups**There are 32 boys and 24 girls that are participating for Field Day. Part 1: What are the various numbers of teams that can be made that w/ould have the same number of boys and girls on each team?Part 2:What is the most number of teams that can be made that would have the same number of boys and girls on each team?Part 3: We want to represent Part 2 in an equation that shows The Greatest Number of Groups \* (boys in each group + girls in each group). How would you write the answer to part 2 in an equation that shows the total number of students in terms of the number of boys and girls in each group times the greatest number of groups? Part 4: What would the answers to Parts 1, 2, and 3 be if there were 96 boys and 72 girls?  |

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| **Rubric** |
| **Level I** | 1. **Level II**
 | **Level III** |
| Developing Proficiency* Student uses inappropriate solution strategy and does not get the correct answer.
 | Not Yet Proficient * There are one or two errors.
 | Proficient in Performance * Accurately solves problem
* Part 1: The common factors (or possible numbers of teams) with the numbers 24 and 32 are 1, 2, 4, and 8.
* Part 2: The greatest common factor (greatest number of teams) with the numbers 24 and 32 is 8.
* Part 3: The equation should be 8 \* (3+4) or 8 (3+4).
* Part 4: If there were 96 boys and 60 girls the common factors (or possible numbers of groups) are 1, 2, 3, 4, 6, and 12. The greatest number of groups would be 12. The equation would be 12 \* (8+5) or 12(8+5).

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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. |

**Field Day Groups**

There are 32 boys and 24 girls that are participating for Field Day.

Part 1:
What are the various numbers of teams that can be made that would have the same number of boys and girls on each team?

Part 2:

What is the most number of teams that can be made that would have the same number of boys and girls on each team?

Part 3:

We want to represent Part 2 in an equation that shows

The Greatest Number of Groups \* (boys in each group + girls in each group).

How would you write the answer to part 2 in an equation that shows the total number of students in terms of the number of boys and girls in each group times the greatest number of groups?

Part 4:

What would the answers to Parts 1, 2, and 3 be if there were 96 boys and 72 girls?