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| **NC.3.NBT.2**  **From 100 to 0** | |
| **Domain** | Number and Operations in Base Ten |
| **Cluster** | Use place value to add and subtract. |
| **Standard(s)** | **NC.3.NBT.2** Add and subtract whole numbers up to and including 1,000.  • Use estimation strategies to assess reasonableness of answers.  • Model and explain how the relationship between addition and subtraction can be applied to solve addition and subtraction problems.  • Use expanded form to decompose numbers and then find sums and differences. |
| **Materials** | Pencil and activity sheet or whiteboards and markers |
| **Task** | Austin and Matthew were playing a game called 100 to 0. To play the game, you roll a pair of dice to make a number. Example: If you roll a pair of dice a get 2 and 6 you could create the number 26 or 62.  All players start with 100 at the beginning of the game. You subtract the number rolled from your number. To win, you have to end up with exactly 0. If you roll more than the number you need to have 0, you lose your turn.  The list shows what each child rolled in the game. Which student won the game? Prove your answer. |

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| **Rubric** | | |
| **Level I**  Not Yet | 1. **Level II** 2. Progressing | **Level III**  Meets Expectation |
| * Student’s response is incorrect, incomplete, or off task. | Student either:   * Is inaccurate in work. * Goes over 100. * Does not have an adequate explanation for the answer. | * Student identifies Austin gets to 100 first. * Student either subtracts from 100 accurately to find the number, or adds the numbers until reaching 100. * Student clearly explains strategies for finding sums/differences. |

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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.** |

**From 100 to 0**

Austin and Matthew were playing a game called 100 to 0. To play the game, you roll a pair of dice to make a number. (Example: If you roll a pair of dice a get 2 and 6 you could create the number 26 or 62.)

All players start with 100 at the beginning of the game. You subtract the number rolled from your number. To win, you have to end up with exactly 0. If you roll more than the number you need to have 0, you lose your turn.

The list shows what each child rolled in the game. Which student won the game? Prove your answer. Show how you found your answer.

**Numbers rolled on place value dice:**

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| **Roll** | **Matthew** | **Austin** |
| Roll 1 | 56 | 27 |
| Roll 2 | 18 | 38 |
| Roll 3 | 39 | 64 |
| Roll 4 | 8 | 26 |
| Roll 5 | 6 | 42 |
| Roll 6 | 9 | 9 |
| Roll 7 | 5 | 2 |
| Roll 8 | 3 | 6 |