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| **Variables and Equations** |
| Evaluates a given expression (using the order of operations)9 × 8 − 3 + 16 ÷ 4 = 72 − 3 + 4 = 73“I have to do multiplication and division first. If the order isn’t followed and I perform the operations in the order in which they appear, I get 21 R1.” | Writes equivalent expressions (for the same number)5 × 5, 30 ÷ 2 + 10, 3 × 5 + 2 × 6 − 2“All of these expressions have value 25.” | Represents balance using concrete materials“The expressions 5 + 5 and 2 × 5 are equivalent because the pans are balanced. Both have value 10.” |
| **Observations/Documentation** |
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| **Variables and Equations (cont’d)** |
| Represents preservation of equality symbolically (with or without an unknown)4 + 2 = 5 + 1“I added 2 to each side to keep the balance.” | Finds the unknown value in an equation representing a situation♦ − 8 = 6♦ + 8 − 8 = 6 + 8 ♦ = 14“I added 8 to each side to preserve equality and to isolate ♦.“ | Solves problems using equations“I have 2 sets of cards, with the same number of cards in each set. I have 24 cards. How many cards are in each set?”“Let ∎represent the number of cards in each set.”2 ∎ = 242 ∎ ÷ 2 = 24 ÷ 2 ∎ = 12“There are 12 cards in each set.” |
| **Observations/Documentation** |
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