Activity 8 Assessment
Solving Equations Concretely

Variables and Equations

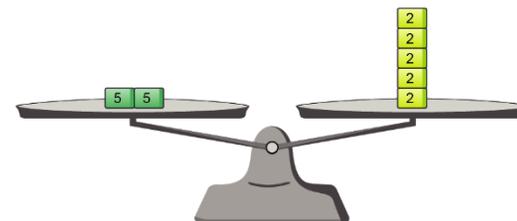| Evaluates a given expression (using the order of operations)	Writes equivalent expressions (for the same number)	Represents balance using concrete materials
$9 \times 8 - 3 + 16 \div 4 = 72 - 3 + 4$ $= 73$ "I have to do multiplication and division first. If the order isn't followed and I perform the operations in the order in which they appear, I get 21 R1."	$5 \times 5, 30 \div 2 + 10, 3 \times 5 + 2 \times 6 - 2$ "All of these expressions have value 25."	 "The expressions 5 + 5 and 2 × 5 are equivalent because the pans are balanced. Both have value 10."

Observations/Documentation

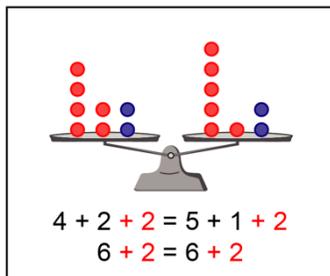|		

Variables and Equations (cont'd)

Represents preservation of equality symbolically (with or without an unknown)	Finds the unknown value in an equation representing a situation	Solves problems using equations

Represents preservation of equality symbolically (with or without an unknown)

$$4 + 2 = 5 + 1$$

$$4 + 2 + 2 = 5 + 1 + 2$$
$$6 + 2 = 6 + 2$$

"I added 2 to each side to keep the balance."

Finds the unknown value in an equation representing a situation

$$\blacklozenge - 8 = 6$$
$$\blacklozenge + 8 - 8 = 6 + 8$$
$$\blacklozenge = 14$$

"I added 8 to each side to preserve equality and to isolate $\blacklozenge$."

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 $\blacksquare$ represent the number of cards in each set."

$$2\ \blacksquare = 24$$
$$2\ \blacksquare \div 2 = 24 \div 2$$
$$\blacksquare = 12$$

"There are 12 cards in each set."

Observations/Documentation

Mathology 4 Alberta
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