

# Activity 7 Assessment Using Symbols

## Variables and Equations

Evaluates a given expression (using the order of operations)

$$9 \times 8 - 3 + 16 \div 4 = 72 - 3 + 4 = 73$$

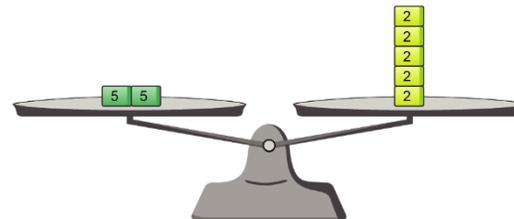
"I have to do multiplication and division first. If the order isn't followed and I perform the operations in the order in which they appear, I get 21 R1."

Writes equivalent expressions (for the same number)

$$5 \times 5, 30 \div 2 + 10, 3 \times 5 + 2 \times 6 - 2$$

"All of these expressions have value 25."

Represents balance using concrete materials



"The expressions  $5 + 5$  and  $2 \times 5$  are equivalent because the pans are balanced. Both have value 10."

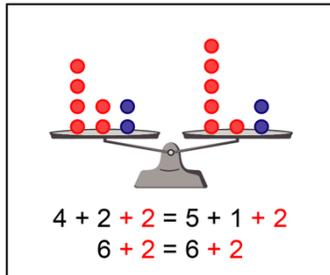
## Observations/Documentation

# Activity 7 Assessment Using Symbols

## 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

$$\begin{aligned} \diamond - 8 &= 6 \\ \diamond + 8 - 8 &= 6 + 8 \\ \diamond &= 14 \end{aligned}$$

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

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."

$$\begin{aligned} 2 \blacksquare &= 24 \\ 2 \blacksquare \div 2 &= 24 \div 2 \\ \blacksquare &= 12 \end{aligned}$$

"There are 12 cards in each set."

## Observations/Documentation