3-1 Expressions to Equations

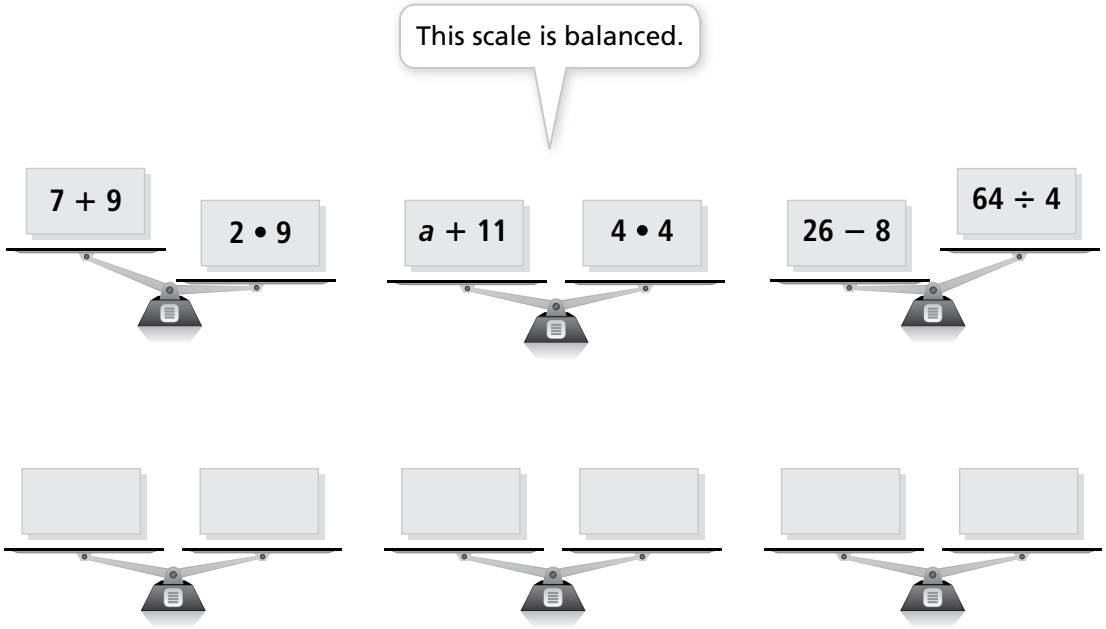
Digital Resources

CCSS: 6.EE.A.2: Write, read, and evaluate expressions in which letters stand for numbers.
6.EE.B.5: ... Use substitution to determine whether a given number in a specified set makes an equation or inequality true.

Launch

MP2, MP5

Shuffle the expressions in the top row of scales so that all of the scales in the bottom row balance.



Reflect What does it mean for two sides of the scale to be balanced?

Got It?

PART 1 Got It

Which are equations?

I. $t + 5 = 17$ **II.** $3c$ **III.** $10y = 13d$

PART 2 Got It (1 of 2)

Which expressions are equal?

I. 16×2 **II.** $24 + 8$ **III.** 4×4

Got It?

PART 2 Got It (2 of 2)

Are the expressions $12a + (6 + 3a)$ and $3(5a + 2)$ equivalent? Explain.

PART 3 Got It

Which equation(s) have a solution of 12?

I. $17 - m = 5$ **II.** $k - 12 = 0$ **III.** $12 + z = 24$

Close and Check

Focus Question

MP6, MP7

What is an equation? How is an equation with variables different from the equations you've seen in the past?

Do you know **HOW?**

1. Complete the equation.

$x(17 - 8) = \square\ x - 8\ \square$

2. Match each expression with an equivalent expression.

A. $\frac{18w}{6}$ ☐ $7w + 8w$

B. $20w + 12w$ ☐ $10w \cdot 2$

C. $10w + 10w$ ☐ $4w(5 + 3)$

D. $10w + 5w$ ☐ $50w - 25w$

E. $25(2w - w)$ ☐ $18w \div 6$

3. Circle the equations for which 5 is a solution.

$3x = 15$

$12 - a = 6$

$35 \div 7 = r$

$f + 9 = 14$

Do you **UNDERSTAND?**

4. Vocabulary Tell which of the following is an *expression* and which is an *equation*. Explain.

$4t = 28$ $\qquad$ $8c + 7$

5. Error Analysis Your friend applied the Distributive Property to conclude that $8(x + 2)$ is equivalent to $8x + 2$. Describe your friend's error and give an expression that is equivalent.