Name _____

More Linear Equations

$$6x = 2(x - 4)$$
$$6x = 2x - 4$$
$$6x + 2x = -4$$
$$8x = -4$$
$$\frac{8x}{8} = \frac{-4}{8}$$
$$x = -\frac{1}{2}$$

Wrong!

Right!

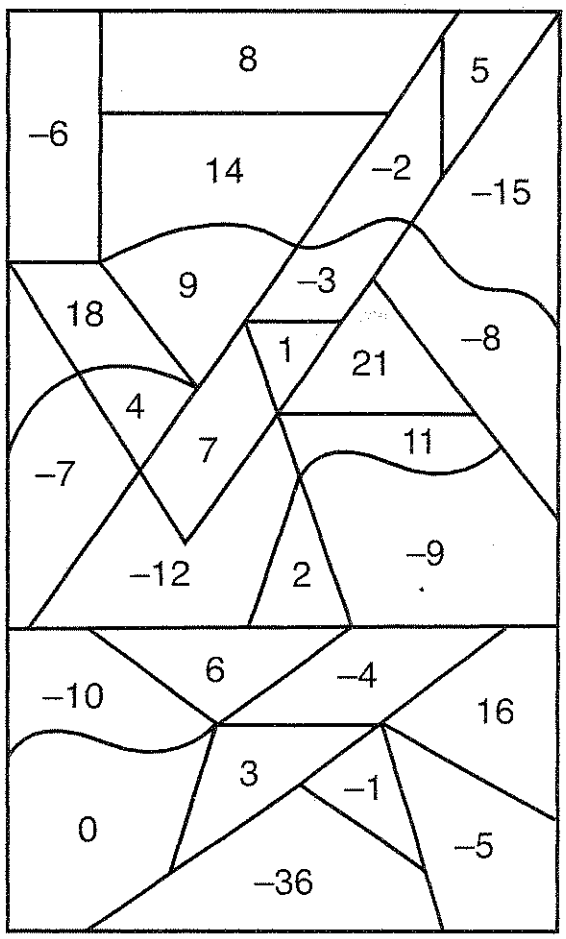
$$6x = 2(x - 4)$$
$$6x = 2x - 8$$
$$6x - 2x = 2x - 2x - 8$$
$$4x = -8$$
$$\frac{4x}{4} = \frac{-8}{4}$$
$$x = -2$$

Quick Review

1. Use the distributive property to rewrite expressions without parentheses.
2. Sometimes there are variables on both sides of an equation. Use opposite operations to move terms so variables are on one side and constants are on the other. You must do the same operation to both sides.
3. Combine like terms. Then solve and simplify.

Solve for x. Then shade in your answers.

1. $x + 6 = 2x + 5$ x = _____
2. $\frac{1}{2}x - 7 = 11 - \frac{1}{2}x$ x = _____
3. $-4x + 8 = -2x + 12$ x = _____
4. $x + 5(x - 1) = 19$ x = _____
5. $2x = 10(x - 4)$ x = _____
6. $6x - 11 = -2x + 5$ x = _____
7. $18x - 15 = -21 + 12x$ x = _____
8. $\frac{1}{2}(10x - 6) = x - 15$ x = _____
9. $7(1 - x) = -4x - 11$ x = _____
10. $3(2x + 12) = -2(x - 4) + x$ x = _____
11. $8(x - 1) = 3x + 7$ x = _____
12. $2x + 4(2x - 1) = 6(x + 4)$ x = _____



Solving Equations

$$3x + 5 = 4x + 6$$
$$3x - 4x + 5 = 4x - 4x + 6$$
$$-x + 5 = 6$$
$$-x + 5 - 5 = 6 - 5$$
$$-x = 1$$
$$\frac{-x}{-1} = \frac{1}{-1}$$
$$x = -1$$

Solve each equation for the given variable.

1. $3m - 8 = 5m + 8$
2. $-t + 9 = t + 5$
3. $7y - 7 = 5y + 13$
4. $4h + 10 = 2h - 22$
5. $-r - 3 = 1 - 3r$
6. $17 + p = 7p - 13$
7. $4x - 7 = 2x + 7$
8. $23b + 9 = 4b + 66$
9. $-4g + 12 = g + 2$
10. $-8t = 27 + t$
11. $13y - 26 = 7y + 22$
12. $4n - 6 = 6n + 14$
13. $e + 8 = 2e - 12$
14. $9w + 6 = 6w - 15$