Name _____ Date _____

Solve Equations With the Distributive Property

You can use the distributive property to help solve some equations.

Let's try it! Solve 4(*h* – 9) + 7 = 3. Use the distributive property to help.

Use the distributive property. Distribute 4 to each of the terms inside of the parentheses.

$$4(h - 9) + 7 = 3$$
$$4(h) + 4(-9) + 7 = 3$$

Simplify. Then identify and combine the like terms on the same side of the equation. Pay attention to the signs.

$$4h - 36 + 7 = 3$$
$$4h - 29 = 3$$

Use inverse operations to get the constant terms together on one side of the equation. Add 29 to both sides and simplify.

$$4h - 29 + 29 = 3 + 29$$
$$4h = 32$$

Use inverse operations to get h alone. Divide both sides by 4 and simplify.

$$\frac{4h}{4} = \frac{32}{4}$$
$$h = 8$$

Practice! Solve each equation.

1. 10(*b* + 2) + 3 = 73

2. 1 + 3(4*f* – 7) = 28

3. 8(3*r* – 4) – 1 = –57

4. –4(2*a* – 1) + 5 = 81

5. –4 + 7(3*v* + 2) = 52

6. –2 – 2(3*w* – 5) = 80

7. 2(7*t* + 8) = 6*t* – 40

8. –5(–2*d* + 1) = 13 + 4*d*

9. 4(–8*g* + 1) = –20*g* – 8

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