

# Using the Distributive Property and Combining Like Terms to Simplify

Directions: Use the distributive property to simplify each expression. After simplifying, plug the number 1 into your answer and into the original problem and solve for each. If you get the same answer, your answer is correct. If you get two different answers, your answer is incorrect.

1)  $6c - (4 - 3c) + 8$

simplify	1 plug-in answer	1 plug-in problem
$6c - 4 + 3c + 8$ $9c + 4$	$9c + 4$ $9(1) + 4$ $9 + 4$ $13$	$6(1) - (4 - 3 \cdot 1) + 8$ $6 - (1) + 8$ $5 + 8$ $13$
	<p>← simplification was correct! →</p>	

2)  $-8w + 3(w + 5)$

simplify	1 plug-in answer	1 plug-in problem
$-8w + 3w + 15$ $-5w + 15$		

3)  $-5(w - 6) + 4$

simplify	1 plug-in answer	1 plug-in problem
$-5w + 30 + 4$ $-5w + 34$		

4)  $8g - (-9 - 5g)$

simplify	1 plug-in answer	1 plug-in problem
$8g + 9 + 5g$ $13g + 9$		

$$5) 3w + 4(w + 4) + 9$$

$$6) -3(-4 + 5) + 3w + 4w$$

simplify	1 plug-in answer	1 plug-in problem
$3w + 4w + 16 + 9$ $7w + 25$		

simplify	1 plug-in answer	1 plug-in problem
$12 - 15 + 3w + 4w$ $-3 + 7w$		

$$7) -(-9d + 5) + 3(2d - 3)$$

$$8) 9(4r - 5) + 6r - 3$$

simplify	1 plug-in answer	1 plug-in problem
$9d - 5 + 6d - 9$ $15d - 14$		

simplify	1 plug-in answer	1 plug-in problem
$36r - 45 + 6r - 3$ $42r - 48$		