3.1 Putting it all together: Simplifying Expressions

1. Multiply/Distributive Property
2. Combine like terms (CLT) - add or subtract coefficients
3. Rewrite so terms w/variables are first (alpha order)
4. Constants last

• no double signs • don't write coefficients 1

Examples:

1. $-4 + 7(2 - 3m)$

$-4 + 14 - 21m$

$-21m + 10$

2. $3(6 + 7n) - 5n$

$18 + 21n - 5n$

$16n + 18$

3. $10 - 5(9n - 9)$

$10 - 45n + 45$

$-45n + 55$

4. $8a + 10(6a - 1)$

$8a + 60a - 10$

$68a - 10$

5. $9p - 3(5p + 2) + 6$

$9p - 15p - 6 + 6$

$-6p$

6. $-10(1 - 9x) + 6(x - 10)$

$-10 + 90x + 6x - 60$

$96x - 70$

7. $-3(10b + 10) + 5(b + 2)$

$-30b - 30 + 5b + 10$

$-25b - 20$

8. $4.2v - 5 - 6.5v$

$-2.3v - 5$

$6.5 - 4.2 = 2.3$

9. $7.5x + 2.75x + 2 - 4x - 5$

$6.25x - 3$

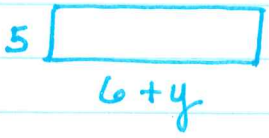
$2.5 + 15 + 10.25 - 4.00 = 6.25$

10. $-2(-5q) + (-72)(q)$

$10q - 72q$

$-62q$

Find the perimeter and area of each rectangle: ↳ add all sides ↳ lw

1.) 

P
$6+y$
$6+y$
5
5
$22+2y$
$\boxed{2y+22}$

A
$5(6+y)$
$30+5y$
$\boxed{5y+30}$

2) 

P
$p-2 > -4$
$p-2$
$12 > 24$
$+ \quad 12$
$\boxed{2p+20}$

A
$12(p-2)$
$\boxed{12p-24}$

3) 

$2h-4$
$2h-4$
5
$+ \quad 5$
$\boxed{4h+2}$

$5(2h-4)$
$\boxed{10h-20}$

4) 

$8+2c$
$8+2c$
2
2
$20+4c$
$\boxed{4c+20}$

$2(8+2c)$
$16+4c$
$\boxed{4c+16}$

5) 

$4x-3$
$4x-3$
6
6
$8x+6$

$6(4x-3)$
$\boxed{24x-18}$

_____ Name _____ Class _____

Reteaching 2-3 Simplifying Variable Expressions

Quiz tomorrow

Simplify $5n + (-n - 4)(-2)$.

$5n + (-n - 4)(-2)$	
$= 5n + (-n)(-2) - 4(-2)$	Use the distributive property.
$= 5n + 2n + 8$	Multiply. Think of $-4(-2)$ as $+(-4)(-2)$.
$= (5 + 2)n + 8$	Use distributive property to combine like terms.
$= 7n + 8$	Add.

Reteaching

Complete each equation.

1. $9a - 7a + 5$ 2a + 5

2. $5k - 4 - 8k$ -3k - 4

Simplify each expression.

3. $12a + 4 - 10a$ 2a + 4

4. $7 + x - 7x$ -6x + 7

5. $2(n - 4) + 3$ 2n - 5

6. $-3(a + 5) + 9$ -3a - 6

7. $5(2y + 1) - 7y$ 3y + 5

8. $2(4 - 3t) - (-3) + 2t$ -4t + 11

9. $8c + 5(c - 3)$ 13c - 15

10. $-2(-4 - 3s)$ 6s + 8

11. $q(-3) + 3(2 + q)$ 6

12. $(3 + k)(-4) - 5k$ -9K - 12

13. $(-3)(1 - 2n) + 2(n + 4)$ 8n + 5

14. $9p - 3(5p + 2) + 6$ -6p