

NC Math 1 U1-1

Distributive Property & Combining Like Terms

1. Identify the coefficient and constant(s) in the expressions listed below:

1a) $8x + 9 - 3x$	1b) $17 - 2a + 5a - 1$
Coefficient(s): _____	Coefficient(s): _____
Constant(s): _____	Constant(s): _____

Algebraic Examples

$a(b + c)$ $ab + ac$	$a(b - c)$ $ab - ac$	$(b + c)a$ $ba + ca$	$(b - c)a$ $ba - ca$
$-a(b + c)$ $-ab - ac$	$-a(b - c)$ $-ab + ac$	$(b + c)(-a)$ $-ba - ca$	$(b - c)(-a)$ $-ba + ca$

2. Coefficients or constants take the sign directly to the _____ of it. Use the Distributive Property and Integer Rules to simplify the expressions listed below:

2a) $3(4x + 5)$	2b) $7(10 - 2b)$	2c) $-5(-3y + 5)$
2d) $-(7y - 4)$	2e) $(2a + b)4$	2f) $(3x - 5y)(-3)$

3a. What is the difference between an expression and an equation? Give an example of each. _____

Expression:	Equation:
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4. Like terms can have different _____, but must have the same _____ and _____.

5. When simplifying an expression, you _____ or _____ the coefficients of the like terms.

6. Steps to simplify an expression:

- Use Distributive Property to get rid of any parenthesis.
- Combine like terms. Use shapes and color to identify like terms.
- Put terms in abc order. If exponents are present, group the same variables together with exponents in descending order.

6a) $-(2g + 5h) - 6(g + h)$

6b) $-5(-8d - 4) - (5d + 5)$

6c) $4(3a + 2b) - 3(3a - 4b)$

6d) $3(x - y) + (5x - 2y)$

6e) $2(b - 3) + 4(2b + 2)$

6f) $(2x + 6)(-2) + 2(3x - 5) + 2$