

Like Terms

Vocabulary:

Term – Each piece of an algebraic expressions separated by an addition or subtraction sign

i.e.  $6x + 5$  ← Term  
           ↑  
           Term

Coefficient

The number with the Variable  
6x

Constant – A term without a variable

i.e.  $6x + 5$  ← Constant

Like Terms – Terms with the same variable (and power)

i.e.  $3x^2 + 2x^2 = 5x^2$   
 $3x + 2x$   
 $x + x + x + x + x$   
 $5x$

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Identify the terms, like terms, coefficients and constants.

1.  $9y - 4 - 11y + 7$

Terms:  $9y, -4, -11y, 7$

Like Terms:  $9y, -11y$

Coefficients:  $9, -11$

Constants:  $-4, 7$

2.  $3x + 2 - 10 - 3x$

Terms:  $3x, 2, -10, -3x$

Like Terms:  $3x, -3x$

Coefficients:  $3, -3$

Constants:  $2, -10$

\* Like terms combine with Like terms AND  
 Constants combine with Constants.

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Combine the like terms and constants to simplify the expressions.

Variable Always go 1<sup>st</sup>

$$1. \boxed{9y} - 4 - \boxed{11y} + 7$$

$$9y - 11y = -2y$$

$$-4 + 7 = 3$$

$$\boxed{-2y + 3}$$

$$3. \underline{1}x + 4x$$

$$5x$$

$$2. \boxed{3x} + 2 - 10 - \boxed{3x}$$

$$3x - 3x = 0$$

$$2 - 10 = -8$$

$$\boxed{-8}$$

$$4. \boxed{4y} + 3z - 2z + \boxed{5y}$$

$$4y + 5y = 9y$$

$$3z - 2z = 1z$$

$$\boxed{9y + z}$$

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Practice Combining Like terms

$$1. \underline{5x} - 3 + \underline{7x} - 2$$

$$12x - 5$$

2.

$$\boxed{5y} + 3 - 3 - \boxed{6y}$$

$$-1y + 0$$

$$\boxed{-y}$$

$$3. 7a + 2b + 3a$$

$$4. 10 - 7 + 4m - 8m$$

Challenge:  $2(3x + 4) - 4(2x - 5)$

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