

Unit 2: Section 3.1/ 3.2 – Algebraic Expressions/ Adding and Subtracting Linear Expressions

**Objective:**

**Vocabulary**

	Definition	Examples
<b>Term</b>		
<b>Constant</b>		
<b>Like Terms</b>		
<b>Coefficient</b>		
<b>Simplest Form (algebraic expression)</b>		

**Example 1:** Identify the terms and like terms in each expression.

a)  $9x - 2 + 7 - x$

b)  $2r^2 + 7r - r^2 - 9$

**Example 2:** Name the coefficients, like terms, and constants in:  $6 + s - 42 - 5s + 8s^2$

Coefficients: \_\_\_\_\_

Like Terms: \_\_\_\_\_

Constants: \_\_\_\_\_

**Example 3:** Write the expression from Example 2 in **descending order**.

$$6 + s - 42 - 5s + 8s^2$$

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**Example 4:** Use the following expression:  $2x^3 - 9 - 4x^2 + 18x^2 + 3x + 6x^3 - 7x + 11$

a) Name the coefficients, like terms, and constants in the following:

Coefficients: \_\_\_\_\_

Like Terms: \_\_\_\_\_

Constants: \_\_\_\_\_

b) Simplify by combining the like terms and writing in **descending order**.

**Example 5:** Simplify:

a)  $7x + y - 2x - 7$

b)  $9 + 4f + 3 + 2f$

c)  $2b + b - 4$

d)  $(7 - 3x)5 + 20x$

e)  $3x^2 + x + 15 - 7x^2 + 9x^3 - 42 - 13x - 8x$

**Example 6:** Simplify. (Make sure your answer is in **descending order**.)

$$20d - 5(4d + 11 - 3) + 18 - 34d + 16d^2$$

**Example 7:** An exercise mat is 3 times as long as it is wide.

a. Write an expression in simplest form for the perimeter of the mat.

b. Find the perimeter when the width is 3ft.

