Day 2 – Algebraic Expressions Practice

1. Complete the table.

Expression	List the Terms	List the Factors	List the Variables	List the Coefficients	List the Constants
$3y^3 + 4y^2 - 7y + 1$					
$5x^4 - 9x^2$					
$-a^2 + 6a - 3$					
15					

2. Write an expression with exactly 5 terms, containing the coefficients 7, 21, 15, and 8. (Answers will vary.)

3. Simplify each expression (hint: combine "like terms").

a. $5f + 8 - 13f$

b. $2x - 5x^2 + 3 + 4x$

c. $3x^2 + 6x - 2y + 4x^2 + 3y - x$
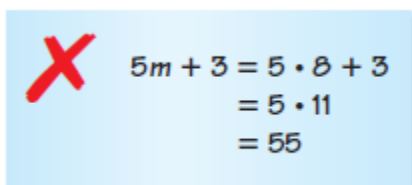
d. $3(2x - 4) + 2x$

e. $-2(8y - 4) + 9y + 6$

f. $\dfrac{13 + 2(7x - 3)}{7}$

4. Give an example of two **like** terms and two **unlike** terms. Explain why they would or would not be classified as like terms.

           Like   **Unlike**

5. Describe the error in evaluating the expression when m = 8.

$$5m + 3 = 5 \cdot 8 + 3$$
$$= 5 \cdot 11$$
$$= 55$$

6. Evaluate the following expressions when a = 10, b = 9, and c = 4.

a. $a^2 - 18$ b. bc + 12.3   c. 3a + 2b – 6c

7. The expression 20a + 13c is the cost for a adults and c students to enter the science museum.

a. Find the total cost for 4 adults and 24 students.

b. You figure out the cost for the group, but then the number of adults and students in the group both double. Does the cost double? Explain your answer using an example.

c. In part A, the number of adults doubles, but the number of students is cut in half. Does the cost remain the same? Explain why or why not.

8. Stretch your thinking - Simplify the following expression: 5(x – 4) – (2x – 7) + x – 2(x + 3)