

Name: _____

Date: _____

Learning Goal 5.1

I can identify characteristics of polynomials and simplify polynomials by collecting like terms.

Using algebra tiles, find four **different ways** to represent the following expressions (draw or use actual tiles – your choice). Call me over to check your work before moving on to the next example.

$$2x^2 + 3x - 1$$

1.	
2.	
3.	
4.	

Your Turn!

1. $x^2 + x + 3$	2. $-x^2 - 2x + 1$	3. $2x^2 - x + 5$
4. $-3x^2 + x + 2$	5. $-x^2 + 2x - 4$	6. $-2x^2 + 2x - 2$

Now without tiles, simplify each expression by collecting like terms.

1. $x + 2x + 5x$

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

3. $3x + 4 - 2x - 1 + 5x$

4. $9x^2 - 4x + x^2 + 5x + 3x - x^2$

5. $4y + 9x - 5y - 4x - 7y$

6. $x^2 + y^2 - 5x^2 + 6y^2 + 3x^2$

7. $9 - 4x + x^2 + 3x - 8$

8. $-5x + 7 - 3x^2 + 7x^2 - 4 + 3x$

9. $3x^2 - y^2 + 3z^2 + 4y^2 - 5x^2 + z^2$

10. $5a + 4b + 3c - 11b + 12a - 13c + 2b$

11. $4m - 4n^2 + 7p^3 - 3m^2 + 7n - 2p^2$

12. $4xy - y^2 - 3x^2 + 2xy - x - 3y^2$

Like Terms