**5.2 – Like and Unlike Terms**

What would be the best way to organize this list when going to the grocery store?

2 bananas 5 oranges

3 oranges 8 bananas

1 apple 10 oranges

4 bananas 2 bananas

2 apples 5 apples

This is an example of putting **like terms** together. In algebra, like terms are those that have the same variable(s) raised to the same exponent(s).

Bananas and apples are what we would call **unlike terms**. In algebra, unlike terms have different variables or the same variables, but raised to different exponents.

Examples of like terms: Examples of unlike terms:

We can use **algebra tiles** to "combine like terms", thereby simplifying a polynomial.

Ex. 1: Simplify the following polynomial by representing it with algebra tiles and removing zero pairs.

We don't always want to draw algebra tiles to simplify a polynomial. Instead, you can determine which terms are like terms and then combine them by adding their coefficients (the numbers in front of the variables):

Ex. 2: Simplify the following polynomials. Write the result in descending order.



(b)



Ex. 3: Are and **equivalent polynomials**?