Unit 5 Day 1
5-1 Polynomials - Like Terms

Algebraic Term: ex. x, $4x$, $7x^2$, $3xy$
Each term consists of a product of factors.
Factors can be: a) constants (eg. 2, $-\frac{1}{4}$, 7)
b) variables (x, y, a, b)

Algebraic Term	Coefficient
1) $-3x$	-3
2) ab	1
3) $\frac{x}{3}$	$\frac{1}{3}$
4) $-xy$	-1
5) $\frac{7x}{5}$	$\frac{7}{5}$
6) $-\frac{x^2}{2y}$	$-\frac{1}{2}$

Combining Like Terms: Think of fruit
Like terms can be combined.
Unlike terms cannot.

Terms	Like/Unlike	Simplify
1) $2x^2 - 4x^2$	Like	$-2x^2$
2) $2x^2 - 4x$	Unlike	$2x^2 - 4x$
3) $3x + x$	Like	$4x$
4) $5ab^2 - a^2b$	Unlike	$5ab^2 - a^2b$
5) $5ab^2 - 5b^2a$	Like	0
$5ab^2 - 5ab^2$		

Simplify:

1) $8x - 3x = 5x$

2) $-2x^2 + 9x^2 = 7x^2$

3) $-2ab - 7ba = -9ab$

4) $3x - 7x + 5$
   $= -4x + 5$

5) $\boxed{5x^2} \boxed{-3x} \boxed{+7x} \boxed{-8x^2}$
   $= -3x^2 + 4x$

6) $5ab^2 - 6a^2b + 3ba^2$
   $= 5ab^2 - 6a^2b + 3a^2b$
   $= -3a^2b + 5ab^2$
   $(5ab^2 - 3a^2b)$

7) $(5x - 3y) + (3x + y)$
   $= 5x - 3y + 3x + y$
   $= 8x - 2y$

8) $(5x - 3y) - (2x - 4y)$
   $= 5x - 3y - 2x + 4y$
   $= 3x + y$

Practice 5-1