Chapter 3 section 4
Combining Like Terms

Vocabulary:
Term: single number or variable, product of a number and one or more variables

Term: two parts, number – coefficient, variable.

Example 1: Page 197
$3x^2+5xy+9y^2+12$
Complete the table:

Term	Coefficient	Variable part

Example 2
$a^3-3a^2b+3ab^2-b^3$

Like terms, unlike terms – determined by variable part

like terms – identical variable parts
unlike terms – different variable parts.

Apples, Pears, Bananas

Example 6: page 201
Simplify: 2x + 3y – 5x + 8y

Simplify: Try to write the expression in its most compact form using fewest symbols possible.

Example 7
-2x – 3 – (3x + 4)

Try:
-3a + 4b – 7a – 9b

-9a – 4 – (4a – 8)

Example 8: page 202
2(5 – 3x) – 4(x + 3)

-2(3a – 4) – 3(5 – a)

Example 9

$-8\left(3x^2y-9xy\right)-8\left(-7x^2y-8xy\right)$ $\left(a^2-2ab\right)-2\left(3ab+a^2\right)$

Example 11: page 203

The length of a rectangle is three feet longer than twice its width. Find the perimeter P of the rectangle in terms of its width alone.