15-3 Subtracting Polynomials (setting up problems)

Example 1

Simplify $(5x^2 + 10x) - (3x - 12)$.

$(5x^2 + 10x) - (3x - 12)$

$= 5x^2 + 10x$

$+ (-3x) + 12$ Write the opposite of each term in the second polynomial.

$= 5x^2 + 10x$

$+ \quad -3x + 12$ Group like terms.

Or try it this way

Simplify $(5x^2 + 10x) - (3x - 12)$.

$(5x^2 + 10x) - (3x - 12)$

$= 5x^2 + 10x - 3x + 12$ Write the opposite of each term in the second polynomial.

$= 5x^2 + (10x - 3x) + 12$ Group like terms.

Set up the following problems on separate piece of paper. Watch your positive and negative signs.

1. $(7x + 4) - (2x + 9)$
2. $(3x + 12) - (5x - 6)$
3. $(-4x^2 + 10) - (6x^2 - 9)$
4. $(2x^2 + 3x + 8) - (x^2 + 5x - 1)$
5. $(-x^2 + 9x - 2) - (9x^2 - 4x + 4)$
6. $(3x^2 + 7x + 1) - (8 + 5x + x^2)$
7. $(4x^3 + 6x^2 - 8x) - (x^3 - 2x^2 + 12x)$
8. $(x^3 + 2x^2 + 5x) - (3x^2 - x - 7)$
9. $(x^4 + 8x^2 - 1) - (x^2 - 3x^3 + x^4)$
10. $(5x^4 - 2x^2) - (3x - 2x^2 - 4x^3 + 6x^4)$
11. $(3x^2 + 7xy - 2y^2) - (x^2 - 6xy + 2y^2)$
12. $(-x^2 - 9xy + 5y^2) - (4x^2 - 2xy - y^2)$
13. $(4x^2y - 3xy^2) - (3x^2y - 8xy^2)$