Algebra I
Lesson 8-5

- I can add polynomials.
- I can subtract polynomials.

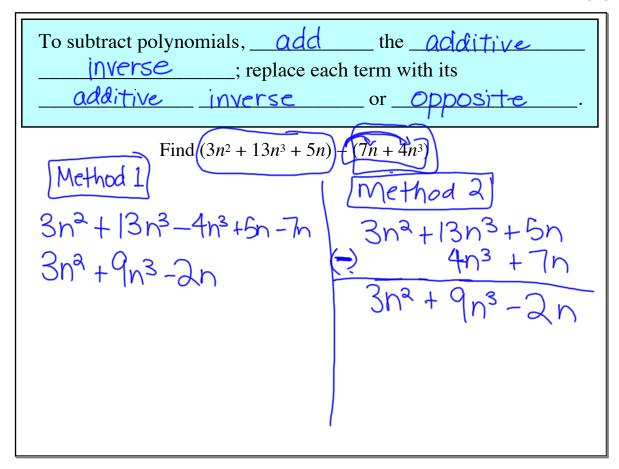To add polynomials, _____ group _____ like terms _____ horizontally _____ or write them in _____ column _____ form, aligning _____ like _____ terms _____.

Find $(3x^2 - 4x + 8) + (2x - 7x^2 - 5)$

Method 1

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

Method 2

$3x^2 - 4x + 8$
$(+) -7x^2 + 2x - 5$
$-4x^2 - 2x + 3$

To subtract polynomials, ___add___ the ___additive___ ___inverse___; replace each term with its ___additive___ ___inverse___ or ___opposite___.

Find $(3n^2 + 13n^3 + 5n) - (7n + 4n^3)$

Method 1

$3n^2 + 13n^3 - 4n^3 + 5n - 7n$

$3n^2 + 9n^3 - 2n$

Method 2

$3n^2 + 13n^3 + 5n$

$(-)\qquad 4n^3 + 7n$

$3n^2 + 9n^3 - 2n$

The total number of public school teachers T consists of two groups, elementary E and secondary S. From 1985 to 1998, the number (in thousands) of secondary teachers and total teachers could be modeled by the following equations, where n is the number of years since 1985.

$$S = 11n + 942$$
$$T = 44n + 2216$$

Find an equation that models the number of elementary teachers E for this time period.

$\begin{array}{ll} T & 44n + 2216 \\ -S \;(-) & 11n + 942 \\ \hline E = & 33n + 1274 \end{array}$

Use the equation to predict the number of elementary teachers in the year 2010.

$E = 33(25) + 1274$
$= 825 + 1274$
$= 2,099,000$

Assignment

Pgs. 441-442 #12-26 even; 30, 32-33