

Subtraction with Polynomials

1st: Distribute the subtraction sign

2nd: Drop the parentheses.

3rd: Combine like terms (recall: like terms have the same variables raised to the same power).

4th: Add the coefficient and keep the variables (& exponents) the same.

$$\begin{aligned}
 \text{Example: } & (35x^2 + x - 5) - (17x^2 - x + 5) \\
 & = 35x^2 + x - 5 - 17x^2 + x - 5 \\
 & = 35x^2 - 17x^2 + x + x - 5 - 5 \\
 & = 18x^2 + 2x - 10
 \end{aligned}$$

Example 6: Subtract.

a. $(5x^3 - 6x^2 + x + 9) - (4x^3 + 10x^2 - 6x + 7)$

b. $(8x^2y + 2x^2y^2 - 7xy^2) - (-3x^2y + 5x^2y^2 + 3xy^2)$