

Name NOTES

## Algebra II: Subtracting Polynomials

### Essential Question:

How do I subtract polynomials?

### Sub Questions:

What do I do differently when I subtract a polynomial? (power point)

Re-write subtraction as adding the opposite!

$$\text{EX } (3x^2 + 2b - 4) - (2x^2 - 3b + 6)$$

$$= (3x^2 + 2b - 4) + (-2x^2 + 3b - 6)$$

1)

$$\begin{array}{r} (9y - 7x + 15a) + (+3y + 8x + 8a) \\ + 3y + 8x + 8a \\ \hline \end{array} \quad \begin{array}{r} (7a - 10b) - (3a + 4b) \\ = (7a - 10b) + (-3a - 4b) \\ \quad -3a - 4b \\ \hline \end{array}$$

$$12y + (-15x) + 23a$$

or  $12y - 15x + 23a$

$$\frac{-3a - 4b}{4a - 14b}$$

3)

$$(4x^2 - 2xy + 3y^2) - (-3x^2 - xy + 6)$$

$$= (4x^2 - 2xy + 3y^2) + (3x^2 + xy - 6)$$

$$+ 3x^2 + xy + 6$$

$$\boxed{7x^2 - xy + 3y^2 + 6}$$

5)

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Subtract the Polynomials.

1)  $(2x^2 + 2x) - (x^2 - 3x)$

2)  $(a + 1) - (2a - 4)$

3)  $(2b - 2) - (b - 4)$

4)  $(x^2 + 1) - (x^2 + 1)$

5)  $(5m - 16) - (m + 2)$

6)  $(3n - 2) - (m + 2)$

7)  $(y + 6) - (-3y - 8)$

8)  $(x^2 + 3x + 2) - (x^2 - 4x + 1)$

9)  $(x^2 + 2x + 1) - (4x^2 - 3x + 7)$

10)  $(a^2 + 5ab - 2c) - (3a^2 + ab - c)$

11)  $(x^2 - 8x + 7) - (5x^2 + 9)$

12)  $(4y^2 + 6y + 10) - (2y^2 - 5y + 10)$