

## Day 2 Notes (Subtracting Polynomials)

Algebra 1

Day 2 – Subtracting Polynomials Notes

Learning Targets: • I can subtract polynomials.

Words that mean subtraction: difference, decrease,

Subtracting Polynomials: To subtract polynomials, think of it as distributing a  $-1$  to the second polynomial.

**\*\*Beware of the word FROM! This indicates that you need to Switch order!\*\***

Subtract the following and express your answers in standard form:

1.)  $(5x^2 - 2x + 3) - (7x^2 - 5x + 2)$

$$\begin{array}{r} \boxed{5x^2} - \boxed{2x} + 3 - \boxed{7x^2} + \boxed{5x} - 2 \\ \hline \boxed{-2x^2 + 3x + 1} \end{array}$$

2.)  $(8y - 7y^2) - (6y - 4y^2)$

$$\begin{array}{r} \boxed{8y} - \boxed{7y^2} - \boxed{6y} + \boxed{4y^2} \\ \hline \boxed{-3y^2 + 2y} \end{array}$$

3.) Subtract  $(-4x^2 + 6x)$  from  $(9x^2 - 5x + 3)$ .

$$\begin{array}{r} \textcircled{2} \quad \downarrow \quad \textcircled{1} \\ \underline{\underline{}} \quad (9x^2 - 5x + 3) - (-4x^2 + 6x) \\ \boxed{9x^2} - \boxed{5x} + 3 + \boxed{4x^2} - \boxed{6x} \\ \hline \boxed{13x^2 - 11x + 3} \end{array}$$

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- 4.) What is the result when  $3y^4 - 2y + 7$  is subtracted from  $9y + 5y^4$ ?
- (1)  $-2y^4 - 11y + 7$   
 (2)  $8y^4 + 7y + 7$   
 (3)  $2y^4 + 11y - 7$   
 (4)  $12y^4 + 3y^2 + 7$
- $$(9y + 5y^4) - (3y^4 - 2y + 7)$$
- $$9y + 5y^4 - 3y^4 + 2y - 7$$
- $$2y^4 + 11y - 7$$

- 5.) Find the difference:  $(7m^2 - 6m) - (-2m^2 + 8m)$
- $$7m^2 - 6m + 2m^2 - 8m$$
- $$9m^2 - 14m$$

- 6.) Write  $(4x^2 + 2xy + 8) - (7x^2 - 4xy + 3)$  in standard form.
- $$4x^2 + 2xy + 8 - 7x^2 + 4xy - 3$$
- $$-3x^2 + 6xy + 5$$

- 7.) Subtract  $4x^2 + 2x - 1$  from  $x^2 + 1$  and write the result in standard form.
- $$(x^2 + 1) - (4x^2 + 2x - 1)$$
- $$x^2 + 1 - 4x^2 - 2x + 1$$
- $$-3x^2 - 2x + 2$$