

Bellwork

1. How do you think you did on your test?

2. Can you make up the test?

Yes! Make corrections to the test you took, and then come find me and let's talk.

MUST BE WITHIN 1 WEEK!

3. What is a like term?

Any terms with EXACTLY the same variable setup!

Like Terms

Definition:

Any terms that have the EXACT same variable!

Variables must have the same exponent!

Combining Like Terms:

Add/Subtract the coefficients of the terms.

Adding Polynomials

Procedure:

1. Drop the ()
2. Underline the like terms in a different fashion.
3. Combine the coefficients of the like terms.
4. Write the polynomial in standard form.
(The term with the highest exponent to the term with the lowest/no exponent.)

Examples

$$1. (-x^3 + 4x^2 + 7) + (5x^2 + 9x - 7)$$

$$-x^3 + 4x^2 + 7 + 5x^2 + 9x - 7$$

$$-x^3 + (4+5)x^2 + 9x + (7-7)$$

$$\boxed{-x^3 + 9x^2 + 9x}$$

$$2. (3x^4 - 7x^3 - 2x + 12) + (-2x^3 - 5x^4 + 8x + 8)$$

$$3x^4 - 7x^3 - 2x + 12 - 2x^3 - 5x^4 + 8x + 8$$

$$(3-5)x^4 + (-7-2)x^3 + (-2+8)x + (12+8)$$

$$\boxed{-2x^4 - 9x^3 + 6x + 20}$$

Bellwork

Add the following polynomials:

1. $(x^2 - 7x - 2) + (-9 - 5x^2 + 7x)$

$$x^2 - 7x - 2 - 9 - 5x^2 + 7x$$

$$(1-5)x^2 + (-7+7)x + (-2-9)$$

$$\boxed{-4x^2 - 11}$$

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

$$7x^3 - 2x + 9x^2 - 2x + 3x^4 - x^2 - 6x^3$$

$$3x^4 + (7-6)x^3 + (9-1)x^2 + (-2-2)x$$

$$\boxed{3x^4 + x^3 + 8x^2 - 4x}$$

Subtracting Polynomials

Procedure:

1. Drop the (), and change all signs of the polynomial behind the - sign.
2. Underline the like terms in a different fashion.
3. Combine the coefficients of the like terms.
4. Write the polynomial in standard form.
(The term with the highest exponent to the term with the lowest/no exponent.)

Examples

$$1. (-2x^3 + 7x^2 - 8x) - (-9x^2 + 5x - 3)$$

$$-2x^3 + 7x^2 - 8x + 9x^2 - 5x + 3$$

$$-2x^3 + (7+9)x^2 + (-8-5)x + 3$$

$$\boxed{-2x^3 + 16x^2 - 13x + 3}$$

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

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

$$(1+2)x^4 + (7-7)x^3 + (3-1)x + 5$$

$$\boxed{3x^4 + 2x + 5}$$