Polynomials

Agenda

Warm-Up
Notes - Foldable
Activity - Dice Game
HW - Practice #1-13

Reminders

- Quiz & 4.6 Due tomorrow!!

@mskmath

Essential Questions
How do I classify polynomials?
How do I add & subtract two polynomials?

TURN IN BATHROOM PASSES NOW - LAST CALL!

Warm-Up Thursday

Simplify the following expressions completely.

1. $(-3c^7d^3)^2$ $= (-3c^7d^3)(-3c^7d^3)$ $= (-3 \cdot -3 \cdot c^7 \cdot c^7 \cdot d^3 \cdot d^3)$ $9c^{14}d^6$

2. $-x^2 - 2x + 3x + 4x^2$ combine like terms $3x^2 + x$

Quiz & completed HW 4.6 Due Friday

Algebra I – Unit 7: Topic 1 – Division Properties of Exponents

Practice –Division Properties of Exponents **pp 467-470**

Name _____ Date _____ Period _____

Simplify the expressions below:

1. $\frac{-3x^7}{6x^3}$

2. $\frac{15x^{-3}}{x}$

3. $\frac{8x^{10}y^6}{2x^6y^6}$

4. $\left(\frac{x^{-5}}{x^{-2}}\right)^5$

5. $\frac{x^9y}{(x^2y^9)^2}$

6. $\left(\frac{3b^2c}{6ab^3}\right)^{-2}$

7. A rectangular parking lot has an area of $10a^3b^6$ square yards. If the length of the park is $2a^3$, what is the width of the park?

8. Which expression best represents the simplification of $(3m^{-2}n^4)(-4m^6n^{-7})$?

F $-\frac{12m^4}{n^3}$

G $-\frac{1}{12m^4n^3}$

H $-\frac{m^4n^3}{12}$

J $-\frac{12n^3}{m^4}$

9. Which expression is equivalent to $(-5abc^4)(-3a^3c^2)(-4a^2b^4c^3)$?

A. $-12a^6b^5c^3$

B. $-12a^6b^4c^{24}$

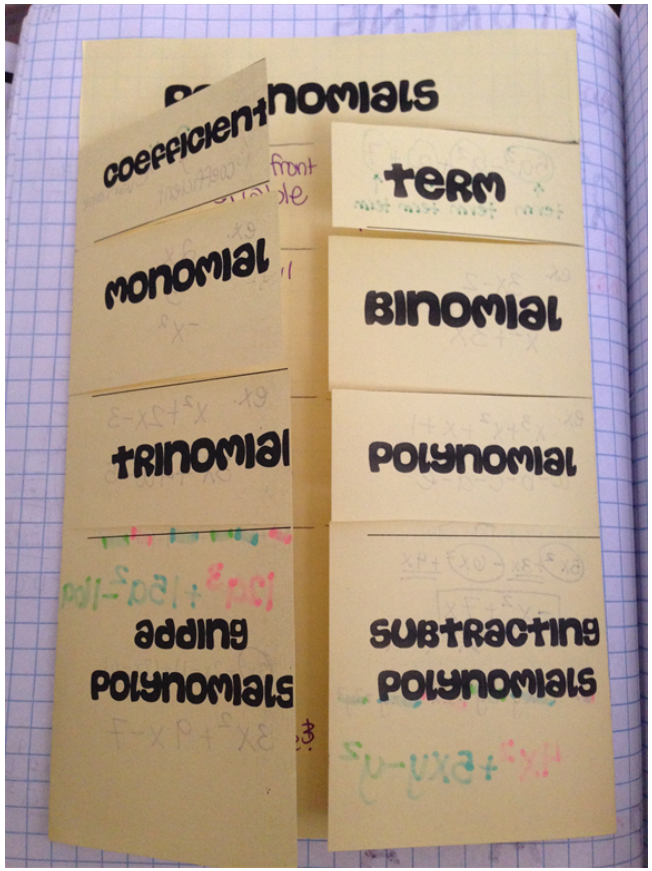
C. $-60a^6b^5c^9$

D. $-60a^9b^9c^9$

10. The volume of a rectangular prism is $125x^3$ cubic units, and the area of its base is $25x^2y^2$ square units. What is the height of the prism in units if $x > 0$ and $y > 0$?

Foldable page p. 90

Essential Questions: How do I classify polynomials?
How do I add & subtract two polynomials?



Fold sides into middle Cut along solid lines.

**Be careful of problems inside bottom 2 flaps!!

Polynomials

Coefficient	Term
Mononomial	Binomial
Trinomial	Polynomial
Adding Polynomials	Subtracting Polynomials

Polynomials

$2x$ — coefficient, variable

The number in front of the variable.

A single number or variable OR #'s and variables multiplied together. Separated by a + or −

$5a^3 - a^2 + a + 7$ — term, term, term, term

ex. $2x$

$\frac{8xy^2}{abc}$

Expression with ONE term.

Expression with TWO terms.

ex. $x^2 + 3x$

$ab - cd$

ex. $x^2 + 2x - 3$

$a + b + c$

Expression with THREE terms.

Expression with FOUR or more terms.

ex. $3x^7 + x^5 - x^4 - 8$

$a - b - c - d - e - f$

$(5a^3 + 3a^2 - 6a + 12a^2) + (7a^3 - 10a)$

$12a^3 + 15a^2 - 16a$

combine like terms

(must have the same variables AND exponent

only add coefficients

1) DISTRIBUTE negative to 2nd polynomial

2) combine like terms

$(5x^2 + 3x) - (6x^2 - 4x)$

$5x^2 + 3x - 6x^2 + 4x$

$-1x^2 + 7x$

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

$3x^2 + 9x - 7$

$(6x^2 + 8xy - 3y^2) - (2x^2 + 3xy - 2y^2)$

$6x^2 + 8xy - 3y^2 - 2x^2 - 3xy + 2y^2$

$4x^2 + 5xy - y^2$

Activity - Polynomial Die!

You and your shoulder partner will receive a die with monomials on each side. For each row on the table, you will roll your die 4 times, recording each roll. Then you will combine any like terms and classify your polynomial as a monomial, binomial, or trinomial.

	1ST ROLL	2ND ROLL	3RD ROLL	4TH ROLL	Combine Like Terms	Name
1						
2						
3						
4						
5						
6						

You will then perform the stated operation with the polynomials you found in your table. Use the polynomial in the "combine like terms" column. Don't forget to distribute the negative for subtraction!!

Due by the end of the period!

Tonight's HW: 1 page!

Algebra I - Unit 7: Topic 2 – Adding and Subtracting Polynomials

Practice – Adding and Subtracting Polynomials **pp 476 – 489**

Name _____ Date _____ Period _____

Classify each polynomial according to the number of terms.

1. $5n^3 + 4n$
2. $4y^6 - 5y^3 + 2y - 9$
3. $3b^7 + 9b^5 + 2b^7 - 5$
4. $\frac{1}{4}wx^5y^2z^2$

Simplify the following polynomials.

5. $3x^3 - 4 - x^3 + 1$
6. $4.4x^2 + 3.1x - 6.3x - 2x^2$
7. $(2t^2 - 8t) + (8t^2 + 9t)$
8. $(-7x^2 - 2x + 3) + (4x^2 - 9x)$
9. $(3s^4 + 4s) - (-10s^4 + 6s)$
10. $(3x^2 - x) - (x^2 + 3x - x)$
11. $(x^2 - 3x + 7) + (2x - 5 + 3x^2) - (x^2 - 6x)$
12. $(3x^2 - 2x + 8) - (x^2 - 4) + (-4x^2 - 5x - 2)$

12. The recreation field at Huffines Park is shaped like a rectangle with a length of $15x$ yards and a width of $10x - 3$ yards. Write a polynomial in simplest form for the perimeter of the field. Then calculate the perimeter if $x = 2$.

13. Darnell and Stephanie have competing vending machine businesses. Darnell's profit can be modeled with the polynomial $c^2 + 8c - 100$. Were c is the number of items sold. Stephanie's profit can be modeled with the polynomial $2c^2 - 7c - 200$. Write a polynomial in simplest form to show how much money they can expect to earn if they decided to combine their businesses.

ADDING/SUBTRACTING POLYNOMIALS HOMEWORK CHECK

Remember: DON'T CHANGE EXPONENTS.

Only combine coefficients!!

DISTRIBUTE the negative to the 2nd set of parenthesis.

Answers:

1. Binomial
2. Polynomial
3. Trinomial
4. Monomial
5. $2x^3 - 3$
6. $2.4x^2 - 3.2x$
7. $10t^2 + t$
8. $-3x^2 - 11x + 3$
9. $13s^4 - 2s$
10. $2x^2 - 3x$
11. $3x^2 - 7x + 2$
12. $-2x^2 - 7x + 10$
13. $P = 50x - 6$; 94 yards
14. $3c^2 + c - 300$

Quiz Averages

2nd - 59

3rd - 60

4th - 50

5th - 64

7th - 60

Extra Credit Exponents Puzzle (for +50 points on quiz) is due Thursday.

Thursday's quiz also covers exponents.

Tutoring: Tues PM
Wed AM/PM
Not available Tues or Thurs AM