Greatest Common Factor

~~Agenda~~

Warm-Up

Set up Unit 8

Notes p. 99

HW - Practice (1 page)

~~Reminders~~

Test Corrections TBA

HW 5.2 due Friday

~~Warm-Up (Wednesday)~~

Multiply the following polynomials.

1. $(x+4)(x-3)$

$x^2 + x - 12$

2. $(2x-5)^2 = (2x-5)(2x-5)$

$4x^2 - 10x - 10x + 25$

$\boxed{4x^2 - 20x + 25}$

On page 97&98, set up unit 8 in your notebook.

Put your "8" tab on page 97 (fold along the dotted line)

UNIT 8

TITLE: Factoring

97

Page #	Page Title
98	Words Worth Knowing
99	Greatest Common Factor

(right hand page)

98

Unit 8 Words Worth Knowing

Unit 8 – Factoring

- ☐ Factors
- ☐ Prime
- ☐ Composite
- ☐ Greatest Common Factor (GCF)
- ☐ Four Term Grouping
- ☐ The Box
- ☐ The X-Box Method

(left hand page)

Greatest Common Factor p.99

You will write your notes on page 99. Copy down important words and definitions. Write the problem and the solution. Use color!!!

This is your textbook.

If you got a zero on Unit 7 notebook check: Complete whatever your notebook was missing. Bring your notebook to tutoring or leave after class to receive a makeup score.

Greatest Common Factor p.99

Factors: A number or expression that is multiplied by another number or expression to get a product.

ex. factors of 6: $\pm1, \pm2, \pm3, \pm6$ don't forget $\pm$

Prime Number: A whole number (not 1) that has exactly two factors: 1 and itself

Composite Number: A whole number that has two or more whole number factors.

CALCULATOR: $y = \#/x$ 2nd GRAPH TABLE

1. 36 comp. $\pm1, \pm2, \pm3, \pm4, \pm6, \pm9, \pm12, \pm18, \pm36$

2. 61 prime

3. -54 composite $\pm1, \pm2, \pm3, \pm6, \pm9, \pm18, \pm27, \pm54$

Greatest Common Factor:

The product of the greatest integer and the greatest power of each variable that divides evenly into each term.

Find the GCF of the given monomials

4. 16, 24

2	8, 12
2	4, 6
1	2, 3

$2 \times 2 \times 2 = \boxed{8}$

5. $15y^3, -20y^2$

5	$3y^3, -4y^2$
y	$3y^2, -4y$
y	$3y, -4$

$\boxed{5y^2}$

6. $13q^4, 2p^2$

1

7. $14ab^2c, 21a^2b^3c$

$3 \overline{)1234}$

7	
abc	$2ab^2c, 3a^2b^2c$
b	$2b, 3ab^2$
1	$2, 3ab$

$\boxed{7ab^2c}$

☆ smallest exponent

Factor the polynomial expression. what multiplies to make this polynomial?

8. $24a^2x^3 - 56ax^2 - 8x$

8	
x	$3a^2x^3 - 7ax^2 - x$
1	$3a^2x^2 - 7ax - 1$

$\boxed{8x(3a^2x^2 - 7ax - 1)}$

9. $35a^2b^3c + 40a^3b^2c^2 - 20a^4b^2c$

5	
a^2	$7a^2b^3c + 8a^3b^2c^2 - 4a^4b^2c$
b^2c	$7b^3c + 8ab^2c^2 - 4a^2b^2c$
1	$7b + 8ac - 4a^2$

$\boxed{5a^2b^2c(7b + 8ac - 4a^2)}$

Find GCF (outside of parenthesis), write what's leftover inside

one page

Algebra I - Unit 8: Topic 1 – Greatest Common Factor

Practice – Greatest Common Factor **pp 524 – 537**

Name _____ Date _____ Period_____

State whether each number is prime, composite or neither. State the factors for numbers that are composite.

1. -80
2. 45
3. 54
4. 71

Find the GCF of the given monomials.

5. $6x^2y$, $42x^2$
6. $8x^4y^3$, $4x^3y^3$, $12x^2y^3$
7. $9r^4s^2d^6$, $56w^2n^4$

Factor the polynomial expression.

8. $12h^4 + 8h^2 - 6h$
9. $-15f - 10f^2$
10. $32a^3b^2c^3 + 40a^2bc^3 - 16abc$
11. $32jk^2 - 16j^2k + 2jk$

Test Statistics!

2nd - 67

3rd - 63

4th - 60

5th - 67

7th - 63

Please Note: Progress reports do not have to be signed and do not have late homework or notebook grades.

Test Corrections:
Fri AM

Next Week:
Mon PM
Tues AM
Wed AM/PM
Thurs AM
Fri AM

late/corrected notebooks due Friday 2/28.