

# Pre-Algebra

## November 7-11, 2011

- Monday, November 7, 2011
- SW write the prime factorization of composite numbers and factor monomials
- SW complete review quiz upon entering the classroom
- CW review notes students took on prime factorization and work through examples on identifying if a number is prime or composite, writing prime factorization of numbers and monomials
- SW complete class work, working with a partner
- SW begin homework if time permits

- Lesson 4-2 Prime Factorization
- Terms you should have in your notes:
  - > Prime number, composite number, prime factorization, factor tree, monomial, and factor
- Identify if the following numbers are prime or composite.
 

Prime = that has multiples of 1 + itself  
Composite = whole number with more than 2 factors
- 1) 21; 3·7 = composite      Any even number except 2 is composite
- 2) 37; none = prime
- 3) 31; none = prime
- 4) 36, 6·6; 9·4; 3·12; 2·18; = composite

● Write the prime factorization of each number. Use exponents for repeated factors. *Anytime you use prime factorization, you write final answer in exponents. Putting the bases in order least to greatest.*

1) 16  

$$\begin{array}{c} 16 \\ / \quad \backslash \\ 8 \cdot 2 \\ / \quad \backslash \\ 4 \cdot 2 \\ / \quad \backslash \\ 2 \cdot 2 \end{array}$$

$$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$$

2) 27  

$$\begin{array}{c} 27 \\ / \quad \backslash \\ 9 \cdot 3 \\ / \quad \backslash \\ 3 \cdot 3 \end{array}$$

$$3 \cdot 3 \cdot 3 = 3^3$$

3) -56  

$$\begin{array}{c} -56 \\ / \quad \backslash \\ -1 \cdot 56 \\ / \quad \backslash \\ 8 \cdot 7 \\ / \quad \backslash \\ 2 \cdot 4 \\ / \quad \backslash \\ 2 \cdot 2 \end{array}$$

$$-1 \cdot 2 \cdot 2 \cdot 2 \cdot 7 = -2^3 \cdot 7$$

4) 392  

$$\begin{array}{c} 392 \\ / \quad \backslash \\ 2 \cdot 196 \\ / \quad \backslash \\ 2 \cdot 98 \\ / \quad \backslash \\ 2 \cdot 49 \\ / \quad \backslash \\ 7 \cdot 7 \end{array}$$

$$2 \cdot 2 \cdot 2 \cdot 7 \cdot 7 = 2^3 \cdot 7^2$$

● Factor each monomial; Answer shows all factors using the exponents

1)  $10x^2y$   

$$\begin{array}{c} 10x^2y \\ / \quad \backslash \\ 5 \cdot 2 \\ / \quad \backslash \\ 2 \cdot 5 \cdot x \cdot x \cdot y \end{array}$$

2)  $-18mn^4$   

$$\begin{array}{c} -18mn^4 \\ / \quad \backslash \\ -1 \cdot 18 \\ / \quad \backslash \\ 2 \cdot 9 \\ / \quad \backslash \\ 2 \cdot 3 \end{array}$$

$$-1 \cdot 2 \cdot 3 \cdot 3 \cdot m \cdot n \cdot n \cdot n \cdot n$$

3)  $21gh^3$   

$$\begin{array}{c} 21gh^3 \\ / \quad \backslash \\ 7 \cdot 3 \\ / \quad \backslash \\ 3 \cdot 7 \cdot g \cdot h \cdot h \cdot h \end{array}$$

4)  $-75ab^2$   

$$\begin{array}{c} -75ab^2 \\ / \quad \backslash \\ -1 \cdot 75 \\ / \quad \backslash \\ 5 \cdot 15 \\ / \quad \backslash \\ 3 \cdot 5 \end{array}$$

$$-1 \cdot 3 \cdot 5 \cdot 5 \cdot a \cdot b \cdot b$$

- Class work: Page 188; 1, 2, 3, 5, 7-10 all
- Homework: Page 189; 12-26 even, 28-37 every third, 44
- Read and take notes on pages 191-193
  - > Define greatest common factor and include examples of how to determine gcf.

- Tuesday, November 8, 2011  $16 = 2 \cdot 2 \cdot 2 \cdot 2$   
 $2^4$
- SW find the GCF of two or more numbers or monomials and use the distributive property to factor algebraic expressions
- SW complete review quiz upon entering the classroom
- CW review notes students took on greatest common factor, and work through examples on finding GCF of numbers and monomials and factoring expressions using the GCF
- SW complete class work, working with a partner
- SW begin homework if time permits  
-Use exponents when you are asked for prime factorization  
-List individual terms when asked to factor

- Lesson 4-3 Greatest Common Factor
- Terms you should have in your notes
  - > Greatest common factor: the greatest factor of 2 or more numbers
- Find the GCF of each set of numbers.
  - > Method 1: List the factors of each term
  - > Method 2: Find prime factors of each term

1) 6, 24 GCF  
Method 1  
6: 1, 2, 3, 6  
24: 1, 2, 3, 4, 6, 8, 12, 24

Method 2  
6: 2 · 3  
24: 2 · 2 · 2 · 3  
GCF = 2 · 3 = 6

2) 16, 60  
Method 1  
16: 1, 2, 4, 8, 16  
60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

Method 2  
16: 2 · 2 · 2 · 2  
60: 2 · 2 · 3 · 5  
GCF = 2 · 2 = 4

3) 10, 25, 30 GCF = 5  
10: 1, 2, 5, 10  
25: 1, 5, 25  
30: 1, 2, 3, 5, 6, 10, 15, 30

Method 2  
10: 2 · 5  
25: 5 · 5  
30: 2 · 3 · 5  
GCF = 5

- Find the GCF of the following monomials.  
Must use method 2

1) 8ab, 18b<sup>2</sup>  
8ab = 2 · 2 · a · b  
18b<sup>2</sup> = 2 · 3 · 3 · b · b  
GCF = 2 · b = 2b

2) 18x<sup>3</sup>y<sup>2</sup>, 42xy<sup>2</sup>  
18x<sup>3</sup>y<sup>2</sup> = 2 · 3 · 3 · x · x · x · y · y  
42xy<sup>2</sup> = 2 · 3 · 7 · x · y · y  
GCF = 2 · 3 · x · y · y = 6xy<sup>2</sup>

- Factor each expression.

1) Find the GCF  
2) Put the GCF outside the ( )  
3) In the ( ) is what is left over

1) 4d + 8  
4d: 2 · 2 · d  
8: 2 · 2 · 2  
GCF = 2 · 2 = 4  
4(d + 2)

2) 3x + 9  
3x: 3 · x  
9: 3 · 3  
GCF = 3  
3(x + 3)

3) 14 + 21c  
14: 2 · 7  
21c: 3 · 7 · c  
GCF = 7  
7(2 + 3c)

- Class Work: Page 193; 2-10 even, 11-13 all
- Homework: Page 194; 14-56 every third

- Wednesday, November 9, 2011
- SW review Lesson 3-7, 3-8, 4-1, 4-2, and 4-3 for test tomorrow.
- SW complete review quiz upon entering the classroom
- CW review key concepts from the previous 5 lessons for tomorrow's test
- SW begin working on review packet with a partner and finish up the packet as homework.
  
- Homework Passes:
  - > Receive 2 homework passes for this quarter by bringing in one package of copy paper by December 1

- Thursday, November 10, 2011
- SW have the entire class period to complete Test 5
  - > Question 11; the measurements of the rectangle are 3cm and 3cm
- Homework: Page 220-221; 8-36 even
- Read and take notes on pages 196-198
  - > Define simplest form and algebraic fraction, include examples for simplifying fractions and algebraic fractions.
  
- Homework Passes – receive 2 for a package of printer paper.
  - > 2 passes per student





