

Name \_\_\_\_\_

Date \_\_\_\_\_ Pd. \_\_\_\_\_

### Notes: Greatest Common Factor

<b>Exponent</b>	
<b>Factor</b>	
<b>Greatest Common Factor</b>	
<b>Least Common Multiple</b>	

**Example 1**

Factor each number.  
Then classify each number as *prime* or *composite*.

a. 28

b. 31

**Example 2**

Find the prime factorization of 200.

Method 1

Method 2

	Definition	Example
Prime Number		
Composite Number		
Prime Factorization		

*Example*

Find the GCF of each set of monomials.

a. 12 and 18

b.  $16xy^2z^2$  and  $72xyz^3$

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### Exit Card: Greatest Common Factor

What is the greatest common factor of  $20x^3y^5$  and  $30xy^7$ ?

F.  $10xy$

G.  $10xy^5$

H.  $10x^3y^7$

J.  $10x^4y^{12}$

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**Homework: Page 478 – 479 (53, 56, 58, 63, 64, 70, 71)**

53. GCF (42, 63, 105)	56. GCF (20gh, 36g <sup>2</sup> h <sup>2</sup> )
58. GCF (18x, 30xy, 54y)	
<p>Central High’s marching band has 75 members, and the band from Northeast High has 90 members. During the halftime show, the bands plan to march into the stadium from opposite ends using formations with the same number of rows.</p> <p>63. If the bands want to match up in the center of the field, what is the maximum number of rows?</p> <p>64. How many band members will be in each row after the bands are combined?</p>	
<p>70. Miko claims that there are at least four ways to design a 120-square-foot rectangular space that can be tiled with 1-foot by 1-foot tiles. Which statement best describes this claim?</p> <p>A Her claim is false because 120 is a prime number.</p> <p>B Her claim is false because 120 is not a perfect square.</p> <p>C Her claim is true because 240 is a multiple of 120.</p> <p>D Her claim is true because 120 has at least eight factors.</p>	
<p>71. Suppose <math>\Psi_x</math> is defined as the largest prime factor of <math>x</math>. For which of the following values of <math>x</math> would <math>\Psi_x</math> have the greatest value?</p> <p>A 53                      B 74                      C 99                      D 117</p>	