## **Factoring: GCF**

<b>Definition:</b> A is a number, variable, monomial, or polynomial which is multiplied by another number, variable, monomial, or polynomial to obtain a product. List all the possible factors of the following numbers:				Step 1: Find the GCF of the	
				Step 2: Find the GCF of the	
				Step 3: Rewrite the GCF as a product of the GCF of the coefficients times the	
				GCF of the variables.	
A. 12	B. 32	C. 19	D. 45	<b>Example 1:</b> What is the GCF of $x^4$ and $x^7$	
In the above, the number 19 is an example of a number because its only positive factors are one and itself.  Definition: The of two or more numbers is the largest number that divides (goes into) the given numbers with a re-				<b>Example 2:</b> What is the GCF of 24x <sup>3</sup> and 9x	
mainder of zero.	0		,		
Find the GCF (greatest common factor) of the following numbers:				<b>Example 3:</b> What is the GCF of $14x^2y^4$ and $21xy^2$	
A. 36 and 54	B. 15 and 60	C. 21 and 42	D. 28 and 39		
				To Factor a Polynomial	
				Ex. 4: 5x <sup>2</sup> +7x Ex. 5 2x <sup>3</sup> -6x <sup>2</sup> Ex. 6 5ab+6a Ex. 7 -12x <sup>5</sup> +4x <sup>3</sup> -8x <sup>2</sup>	

## Finding the GCF with terms that include variables