Your Name

Mrs. Theo

3/2/2021

Greatest Common Factor

Notes

Factor

+/- counting numbers

integer numbers or variables that make up a term by pairing up with another factor using multiplication, thus each are smaller

12: 1, 2, 3, 4, 6, 12

There are factors that lead up to and create civil wars.

Multiple

more of a term, multiply the term by numbers, thus each are bigger

12: 12, 24, 36, ...

two twelves, three twelves

There have been multiple civil wars throughout the world.

Prime Number	A whole number, greater than 1, whose only factors are 1 and itself ex. 41 : 1, 41 only factors 1 is not prime start at 2
Composite Number	A whole number, greater than 1, that has more than two factors ex. 90 : 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90 no more numbers inbetween for factors
Prime Factorization	A whole number expressed as a product of prime factors (multiply, multiplication) ex. 175 : 1, 5, 7, 25, 35, 175 $5 \cdot 35$ → $5 \cdot 7 \cdot 5$ Prime factorization: $5^2 \cdot 7$ $5 \cdot 5 \cdot 7$ $5 \cdot 35 = 175$ $25 \cdot 7 = 175$ ex. 144

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Monomial/ Term	the product (multiply) of rationals (± whole + fractions) and variables possibly with exponents (no addition or subtraction) ex. $32x^2$
Degree of a term	the sum (Add) of the term's variable exponents ex. $32x^2$ Degree is 2 ex. $49a^3b^2$ Add $3+2=5$ Degree is 5
Factoring a Monomial	The product (multiply) of the prime numbers and expanded form of the variables ex. $32x^2$: $16 \cdot 2$ → $4 \cdot 4 \cdot 2$ → $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot x$ ex. $49a^3b^2$: $7 \cdot 7 \cdot a \cdot a \cdot a \cdot b \cdot b$

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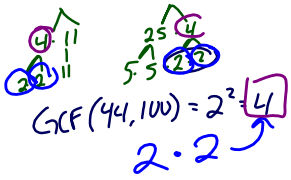
Finding the GCF of a set of Monomials

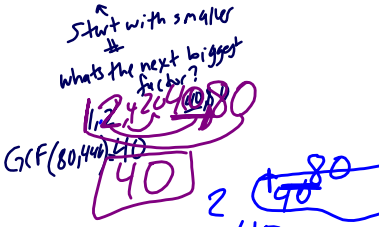
Finding the GCF of the integer coefficients and the highest power of each variable that all the monomials share

Greatest common factor # in front of a term

44 and 100



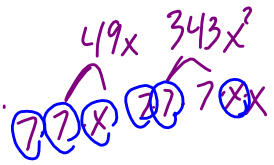
80 and 440



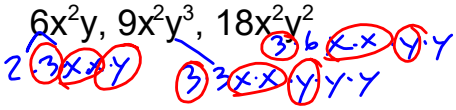
49x and $343x^2$

is 49 a factor of 343?

$GCF(49x, 343x^2) =$ 49x



$6x^2y$, $9x^2y^3$, $18x^2y^2$



$3x^2y$

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Determine what the GCF of each pair is.

1. 27 , 32

2. -64 and -80

3. $4a^7b$, 28ab

4. 96y, 12x, 8y

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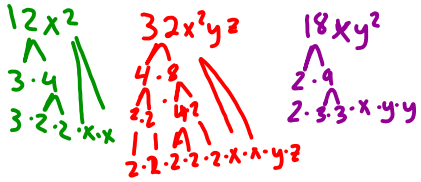
5. $12x^2$, $32x^2yz$, $18xy^2$



6. $18a^4b^2$, $36a^3b$

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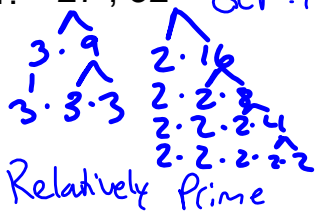
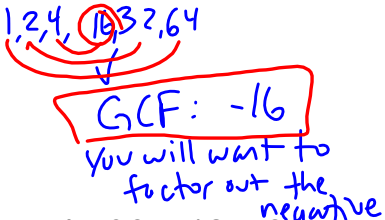
Determine what the GCF of each pair is.

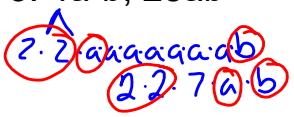
1. 27 , 32



2. -64 and -80

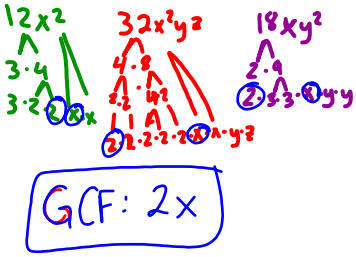


3. $4a^7b$, $28ab$



4. 96y, 12x, 8y

5. $12x^2$, $32x^2yz$, $18xy^2$



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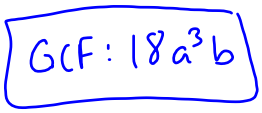

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