Goal: Factor using a GCF

Objectives: I can...

- Identify factors of terms.
- Determine the greatest common factor of two or more terms.
- Factor expressions by taking out the greatest common factor.

Essential Questions

- What is a factor?
- How can you determine the GCF of two or more terms?
- How do you factor by taking out the GCF?
- How can you check to see if you factored an expression correctly?

Factors, Factoring, and GCF

Factors: Factors are values or terms (a combination of a number and a variable) that can be multiplied by another term to get a given term.

Factoring: The process of breaking up a value or term into seperate factors.

GCF: Stands for greatest common factor. This is the largest factor that two or more values or terms have in common.

Find the factors of the given value or term

64

$25x^2$

Remember, think about things that can be multiplied by someting else to get the given value or term!!

Find the factors of the given value or term

$8y^3$

$4xy^2$

Remember, think about things that can be multiplied by someting else to get the given value or term!!

Find the common factors of the values or terms and then find the greatest common factor (GCF)

16 24

$8m$ $2m^2$

Remember, think about things that can be multiplied by someting else to get the given value or term!!

Find the common factors of the values or terms and then find the greatest common factor (GCF)

$4y^2$ $10xy^2$

$9bhy$ $5b^2y$

Remember, think about things that can be multiplied by someting else to get the given value or term!!

Factoring: Using the GCF

Factor $6x^2 - 4x$

1. Determine the GCF → GCF = $2x$
2. Divide each term by the GCF. You subtract exponents when dividing variables → $3x - 2$
3. Write the answer as the product of the GCF and the remaining terms in the expression → $2x(3x - 2)$
4. Check your answer by distributing → $2x(3x - 2)$ → $6x^2 - 4x$

Factor each expression using the GCF

$12x + 4$

$15y^3 - 5y^2$

Factor each expression using the GCF

$9m^3 + 6m^2 - 2m$

$11x^2y^3 + 3xy$

Factor each expression using the GCF

$24xy^2 - 6yz + 8z^3$

$-12c^5 + 18c^3 - 9c^2$

Can you find two answers for this problem?!?!?!

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