

Notes on Factoring by Greatest Common Factor

Name _____

Perhaps, the process of factoring by removing the greatest common factor can be best stated as the **reverse distributive property**. In the distributive property, one is multiplying a certain factor to all of the terms. In factoring by GCF, one is dividing all of the terms by the GCF.

Consider this expression which utilizes the distributive property: $5x^2(4x^4 + 3)$.

After simplifying using the distributive property, you get $20x^6 + 15x^2$.

This section will now demonstrate how to factor by removing the GCF.

Let's now take your answer to the problem above: $20x^6 + 15x^2$.

Using what was learned in the last lesson, what is the GCF of the two terms ($20x^6$ and $15x^2$)?

Again, remember that this process is like the reverse distributive property.

So, let's now write the GCF in front of parentheses and divide (instead of multiplying) each of terms by it.

$$20x^6 + 15x^2$$

$$= \text{_____} (\text{_____})$$

As it turns out, this process yields the original question in the problem above.

Factor the greatest common factor: $8y^5 - 12y^3 + 4y$.

The GCF is $4y$, so it will be placed in front of the parentheses, and all of the terms in the expression will be divided by $4y$.

Relationship between x and y)	1-49 odd pg. 62-63	8, 10, 12, 14, 16	Relations and Functions	PRC	Coordinate Plane (R			
	Functions (Domain and Range)		Functions (Domain and Range)		Dependent and Independent Variabl			
Notes and Comments:	Week #	Chapter	Lesson Title	week #	Chapter	Lesson Title	Standards	Acc
7 odd pg. 68-69	4	2.2	Linear Equations	1.0	Standard Form			1-1
Linear functions			workbook page 6					10-
Slope		1.0	Change in y over the change in x ($\Delta y/\Delta x$)				Short	2.5
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