"I Can Apply the Greatest Common Factor and Least Common Multiple to help Solve Real-World Problems."

"I Can Factor an Expression as a Product of each term's GCF and Resulting Factor Pairs."

Greatest Common Factor

Factors are numbers that divide evenly into another number. Find the factors of each number below.

18	24	36

Circle the **Greatest Common Factor** of all of the factors above.

In the above example, we were concerned with all of the factors. We really only need to be concerned with the common factors so we use the following technique to find the GCF.

Find the GCF of 18, 24, and 36.

Find the GCF of 30 and 45

Find the GCF of 48 and 84.

Find the GCF of 32, 24 and 80

On Your Own

Find the GCF of 56 and 144.

Find the GCF of 48, 60, and 120

Factoring an Expression

Factoring the GCF out of an expression allows is to reverse the Distributive Property. Notice what happens at each level of the birthday cake.

1. Factor $12+18$

2. Factor $8x+24$

On Your Own

3. Factor $12+30x$

3. Factor $36x+18y+45z$

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"I Can Factor an Expression as a Product of each term's GCF and Resulting Factor Pairs."

Greatest Common Factor

Factors are numbers that divide evenly into another number. Find the factors of each number below.

18	24	36
1 x 18	1 x 24	1 x 36
2 x 9	2 x 12	2 x 18
3 x (6)	3 x 8	3 x 12
	4 x (6)	4 x 9
		6 x (6)

Circle the **Greatest Common Factor** of all of the factors above.

In the above example, we were concerned with all of the factors. We really only need to be concerned with the common factors so we use the following technique to find the GCF.

Find the GCF of 18, 24, and 36.

	18	24	36
2	9	12	18
3	3	4	6

GCF = 6

Find the GCF of 30 and 45

	30	45
3	10	15
5	2	3

GCF = 15

Find the GCF of 48 and 84.

	48	84
2	24	42
2	12	21
3	4	7

GCF = 12

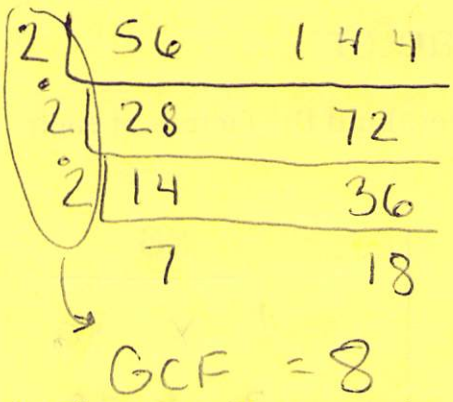
Find the GCF of 32, 24 and 80

	32	24	80
2	16	12	40
4	4	3	10

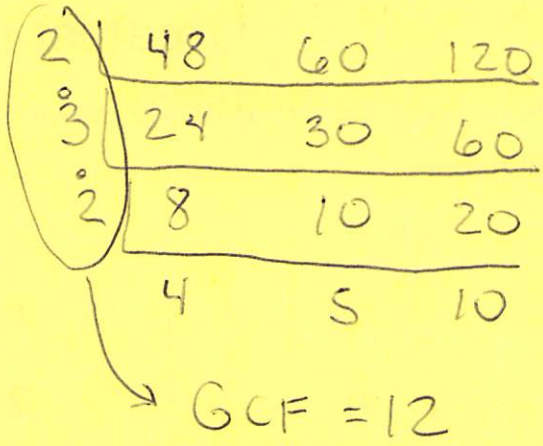
GCF = 8

On Your Own

Find the GCF of 56 and 144.



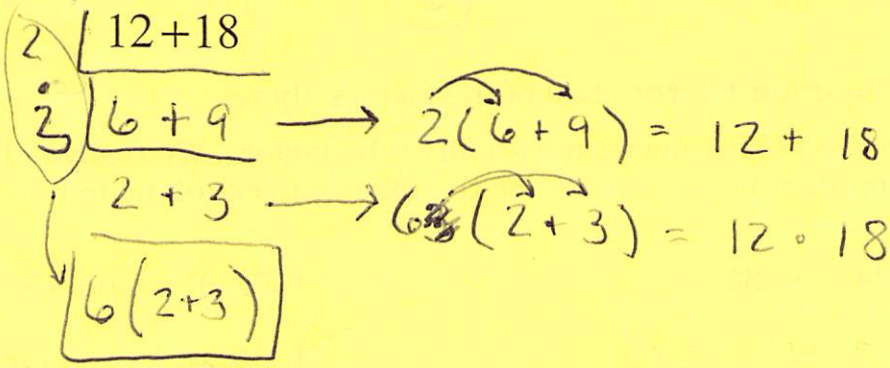
Find the GCF of 48, 60, and 120



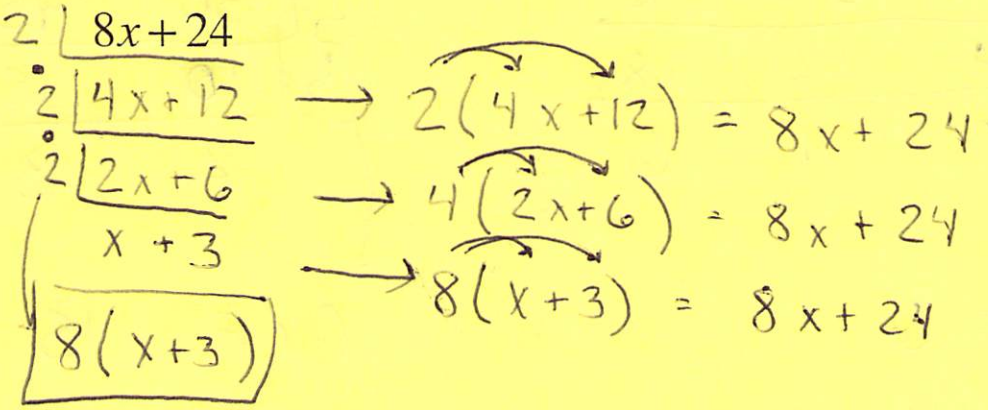
Factoring an Expression

Factoring the GCF out of an expression allows is to reverse the Distributive Property. Notice what happens at each level of the birthday cake.

1. Factor

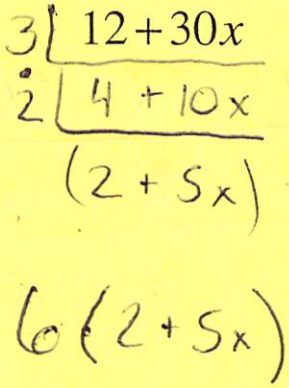


2. Factor



On Your Own

3. Factor



3. Factor