

Review Pg. 301#17d

U4P2L2 – Common Factoring

Students will :

- learn to common factor algebraic expressions
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Common factoring is the reverse of the distributive property. For example:

$$5(5x - 3y + 6) = 25x - 15y + 30$$

If we were asked to factor $25x - 15y + 30$:

1. Determine the largest expression (called the GCF – Greatest Common Factor) that ALL of the terms in the polynomial can be divided by.
In this case $GCF = 5$
2. Write the GCF, then a bracket: $5($
3. Decide what you would have to multiply the GCF by to get the terms in the original polynomial:

$$\text{Therefore, } 25x - 15y + 30 = 5(5x - 3y + 6)$$

Another way to determine what goes in the bracket is to divide each term in the original polynomial by the GCF.

Note: You can check to see if you have factored an expression properly by using the distributive property to expand the factored form of the polynomial.

Examples

Factor:

1. $6x^2 - 3x$

2. $4x^4 + 2x^3 - 6x^2$

3. $4x^2y + 24xy^2 - 8xy$

4. $x^4y^3 + x^3y^3 - x^5y^2$

Ex. Handout#(11 – 15)all