Lesson 1.2.1: Factoring Polynomials with Common Monomial Factor

Factoring: the reverse process of getting the product of any number or algebraic expression.
Factoring Polynomials: describing the algebraic expression as the product of two or more expressions
Common Factor: a factor that is contained in every term of an algebraic expression
How to Factor a Polynomial with a Common Monomial Factor

1. Factor out the greatest common monomial of all terms of the given expression.
2. Divide each term of the expression by the greatest common factor. The resulting expression is the other factor.

Practice Exercises 1.2.1

Factor the following polynomials completely.

1. $3x+6$
2. $12x^4+8x^3y+4x^2y^2$
3. $3x^3-6x^2+3x$
4. $6y^3z+7y^2z^2+2yz^3$
5. $12x^3+9x^2y+6xy^2$
6. $2x^3-8x^2+4x$
7. $12x^4+18x^3y+6x^2y^2$
8. $35x^3-7x^2+14x$
9. $8y^3z+16y^2z^2+24yz^3$
10. $18x^3+9x^2y+36xy^2$

Activity 1.2.1

Factor the following polynomials completely.

1. $15xy+6y$
2. $18x^3+8x^4y+14x^2y^3$
3. $6x^4-15x^2+18xy$
4. $12y^3z+15y^2z^2+3yz^4$
5. $15x^3+10x^2y+5xy^2$
6. $6x^4-9x^2+12xy$
7. $14x^3+7x^4y+49x^2y^3$
8. $5x^4-15x^2+20xy$
9. $18y^3z+45y^2z^2+36yz^4$
10. $12x^4-8x^2+28xy$

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