

Lesson #5.1: Factoring Expressions with Common Factors

Learning Goal: We are learning to Factor expressions that contain common factors.

Simplify each expression.

1) $(5r - 1 - 4r^4) + (1 - 7r^3 + 2r^4)$

2) $2n^2(6n - 8)$

3) $\frac{6x^3y + 3x^2y^3}{3x^2y}$

4) $5(2y^2 + 3y - 8) - 2y(3y - 4)$

Notes on Common Factoring: Factoring is the _____ of expanding. Hence, when expanding, that work eliminates brackets. Factoring brings brackets back into the equation. Also, expanding uses multiplication, therefore factoring uses _____.

Factor the common factor out of each expression.

5) $8n^2 - 6$

6) $20m^5 + 15$

$$7) 2p^5 + 5p^4$$

$$8) 3x^6 + x^4$$

$$9) -8uv^5 - 3u^2v - 2uv$$

$$10) 8x^4y^2 - 18x^3y + 18x^2y$$

$$11) 5x(x - 3) + 8(x - 3)$$

$$12) 3xy(y + 2) - 17w^2(y + 2)$$

Success Criteria:

- I can identify common factors
- I can factor expressions by dividing each term by the common factor
- I can write a factored expression as a monomial \times a polynomial