Math 9 – Unit 5: Algebra II Name: _____

Lesson #1: Factoring Expressions with Common Factors Date: _____

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 × a polynomial