Lesson #1. Factoring Expressions With Common Factors

Date_____

Simplify each expression.

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

2) $(8p + 6 + 8p^3) - (7p^3 - 6 + 3p)$

3) $2n^2(6n - 8)$

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