Algebra 2 Name: _____ Date: _____

MORE PRACTICE WITH SIMPLIFYING POLYNOMIALS

Simplify Completely.

Example 1. $(xy-3)^2$

$(xy-3)(xy-3) =$

$x^2y^2 - 3xy - 3xy + 9$

$= x^2y^2 - 6xy + 9$

Example 2. $(3+xy-x^2)-(2-3x^2)$

$-1 \quad -(-3)$

$1 + xy + 2x^2$

Example 3. $(a-b)(a^2-4ab+b^2)$

$= a^3 - 4a^2b + ab^2$

$\quad - a^2b + 4ab^2 - b^3$

$a^3 - 5a^2b + 5ab^2 - b^3$

Example 4. $u(t-2)^2$ $= u(t-2)(t-2)$

$= u(t^2 - 2t - 2t + 4)$

$= ut^2 - 4ut + 4u$

Example 5. $\frac{-4p}{p} = -4$

Example 6. $\frac{4-p}{p}$

$\frac{4}{p} - \frac{p}{p} = \frac{4}{p} - 1$

Example 7. $3t^{-3} - t^{-2}$

$\frac{3}{t^3} - \frac{1}{t^2}$

Example 8. $3t^{-3}(t^{-1})$ $= 3t^{-4}$

$= \frac{3}{t^4}$

Simplify Completely.

1. $(2-x)^2$

2. $(2x)^2$

3. $(2-x)-(2-x)$

4. $(3+xy-x^2)-(30xy-20)$

5. $-7abc+14abc-5ab$

6. $-7abc(14abc-5ab)$

7. $-2p^2(3pq-4p+q)$

8. $-2p^2-(3p^2-4p+8p)$

9. $\frac{3x}{x}$

10. $\frac{3-x}{x}$

11. $(x+1)(x^2-xy)$

12. $(x+1)(x^2-xy+y)$

13. $7t^2u(t-2u)$

14. $7t^2u(t-2u)^2$

15. $7t^{-2}+7t^{-1}$

16. $7t^{-2}(7t^{-1})$