

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Algebra  
Unit 7  
HW 7-2

1) Simplify:  $-2x^2y^3(2xy - 5x)$   
 $-4x^3y^4 + 10x^3y^3$

2) Simplify:  $(2x + 5)^2$   
 $(2x + 5)(2x + 5)$   
 $4x^2 + 10x + 10x + 25$   
 $4x^2 + 20x + 25$

3) Simplify:  $(x + 2)(x^2 + 4x + 3)$   
 $x^3 + 4x^2 + 3x + 2x^2 + 8x + 6$   
 $x^3 + 6x^2 + 11x + 6$

4) Simplify:  $(x - 4)(y + 3)(x - 5)$   
 $(x^2 + 3x - 4x - 12)(x - 5)$   
 $(x^2 - x - 12)(x - 5)$   
 $x^3 - x^2 - 12x - 5x^2 - 5x + 60$   
 $x^3 - 6x^2 - 7x + 60$

5) Simplify:  $(x+2)(x-2)(x+3)(x-3)$

$$(x^2 - 2x + 2x - 4)(x^2 - 3x + 3x - 9)$$

$$(x^2 - 4)(x^2 - 9)$$

$$x^4 - 9x^2 - 4x^2 + 36 \rightarrow \boxed{x^4 - 13x^2 + 36}$$

6) Simplify:  $(3x^2 - 7x - 8)(9 - 10x - 8x^2)$

$$\boxed{27x^2} - \boxed{30x^3} + \boxed{24x^4} - \boxed{63x} - \boxed{70x^2} + \boxed{56x^3} - \boxed{72} + \boxed{80x} + \boxed{64x^2}$$

$$\boxed{24x^4 + 26x^3 + 161x^2 + 17x - 72}$$

7) Simplify:  $(x-2)(14-5x) - (7-x)(10x^2-8x+6)$

$$\boxed{14x} - 5x^2 - 28 + \boxed{10x} - (\boxed{70x^2} - \boxed{56x} + 42 - 10x^3 + \boxed{8x^2} - \boxed{6x})$$

$$-5x^2 + 24x - 28 - (-10x^3 + 78x^2 - 62x + 42)$$

$$\boxed{-5x^2} + \boxed{24x} - 28 + 10x^3 - \boxed{78x^2} + \boxed{62x} - 42$$

$$\boxed{10x^3 - 83x^2 + 86x - 70}$$