

Multiplying Polynomials Assignment

Expand and Simplify the following polynomials:

1) $(x+1)(x+4)$

$$x^2 + 5x + 4$$

5) $(x-8)(x-6)$

$$x^2 - 14x + 48$$

2) $(x+5)(x+6)$

$$x^2 + 11x + 30$$

6) $(2x+1)(x-3)$

$$2x^2 - 5x - 3$$

3) $(x-3)(x+2)$

$$x^2 - x - 6$$

7) $(2x-7)(5x-3)$

$$10x^2 - 41x + 21$$

4) $(x+7)(x-4)$

$$x^2 + 3x - 28$$

8) $(-2x-y)(-3x+y)$

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

9) $2(x-7)(2x+1)$

$$= 2(2x^2 - 13x - 7)$$

$$= 4x^2 - 26x - 14$$

13) $(4x-5y)^2$

$$16x^2 - 40xy + 25y^2$$

10) $-(x-4)(x-1) + 5(3x-1)(2x+1)$

$$= -(x^2 - 5x + 4) + 5(6x^2 + x - 1)$$

$$= -x^2 + 5x - 4 + 30x^2 + 5x - 5$$

$$= 29x^2 + 10x - 9$$

14) $(x+1)(x-1)$

$$x^2 - 1$$

11) $(x+5)^2$

$$x^2 + 10x + 25$$

15) $(x+6)(x-6)$

$$x^2 - 36$$

12) $(x+3y)^2$

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

16) $(3x+4y)(3x-4y)$

$$9x^2 - 16y^2$$