

Name \_\_\_\_\_  
Mr. Schlansky

Date \_\_\_\_\_  
Algebra 2

## *Operations with Polynomials*

1. Express  $(x^2 - 5x - 2) + (-6x^2 - 7x - 3)$  in simplest terms.
2. Express  $(3x^2 - 8x + 1) + (2x^2 - 3x + 5)$  in simplest terms.
3. Express  $(-2x^2 + 5x - 7) - (7x^2 - 3x + 2)$  in simplest terms.
4. Express  $(7x^2 + 2x + 1) - (2x^2 - 3x - 5)$  in simplest terms.
5. What is the result when  $5m^2 + 3m - 1$  is subtracted from  $7m^2 - 5m + 1$ ?

6. What is the result when  $7xy + 5y - 2x$  is subtracted from  $9xy - 5y + 3x$  ?

**Express the following in simplest terms**

7.  $\frac{12x^3 - 6x^2 + 2x}{2x}$

8.  $\frac{8x^5 - 2x^4 + 4x^3 - 6x^2}{2x^2}$

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

10.  $-3x^2y(5xy^2 + xy)$

11.  $(x - 4)(x + 6)$

12.  $(2x - 3)(3x + 1)$

13.  $(x^2 + 2x - 4)(x + 3)$

14.  $(2x^2 + 3x - 2)(x - 2)$

15.  $(3x^2 + x - 5)(x - 4)$

16.  $(2y^2 - 3y - 1)(y + 7)$

17.  $(4x^2 + 2x + 3)(x - 2)$

18.  $(-5x^2 - 4x + 1)(2x + 5)$

19.  $(m + 7)^2$

20.  $(y - 4)^2$

21.  $(x - 9)^2$

22.  $(z + 2)^2$

23.  $(2x - 3)^2$

24.  $(4x + 2)^2$