

Algebra 0507
Review– Polynomials

Name_____

Add or Subtract each of the following. Remember the RULES!!!!

- You can only add or subtract what kind of terms?_____
- What do you do with the coefficient?_____
- What do you do with the variables and exponents?_____

1. $(5m + 2n) + (4m + n)$	2. $(8x - 2y) + (3x + 6y)$
3. $(x + 9) - (4x + 1)$	4. $(7y^2 - 15) - (2y^2 - 3)$
5. $(2x^3 + 4x^2 - 6) + (-x^3 + 3x^2 - 5)$	

Multiply each monomial by the polynomial. Then combine like terms. Remember the RULES!!!

- What do you do with the coefficients? _____
- What do you do with the exponents? _____

6. $4x(2x^2 + 2y)$	7. $-5y(7y^2 - 6y + 2)$
8. $6x^2y(x^3y - x^4)$	9. $-2x^2y^4(-4x^3y - 6xy^3)$
10. $5x(2x + 5) + 4x(3x - 2)$	11. $-6y(2y^2 - 3) - 4y(5y^2 + 7)$
12. $2xyz(x^2 + y^2 + z^2)$	13. $-7x^4(3 - x^2)$

Multiply each binomial. FOIL!!! (or use the formulas if you can)
Don't forget to combine like terms in your answers.

14. $(x+2)(x-1)$	15. $(x-4)(x+3)$
16. $(x-5)(x-2)$	17. $(2x+3)(3x-4)$
18. $(5x-2)(x-1)$	19. $(4x^2+5)(4x^2+5)$
20. $(x+2)^2$	21. $(x-4)^2$

22. $(3x-1)^2$	23. $(x-5)(x+5)$
24. $(x+2)(x-2)$	25. $(3x+5)(3x-5)$

Simplify.

26. $2x-4(3x-2)$	27. $3x-4(5x+6)$
28. $2(-2x+2)-10+4x$	29. $(x+2)^2+3(2x-4)$

Extra Credit Problems:

These are only to be completed AFTER you have FINISHED the test and checked your answers. GOOD LUCK!

Each problem is worth 3 points.

1. $(x-3)(x+3)(2x-5)$

2. $(4x^2 + 3x + 5)(-3x^2 + x - 8)$