NAME: _____ **PERIOD**: _____ **DATE**: _____

Identify each polynomial (based on the COLUMN HEADINGS).

Polynomial	# of Terms	Name based on # of Terms	Degree
1. $\mathbf{17x^2 - 4x + 3}$			
2. $\mathbf{8x^3y^2}$			
3. $\mathbf{3y^3 + 5}$			

Write the polynomial in STANDARD FORM.

4. $7y + 9y^2 - 3y + 3y^3 - 4y + 6$ _____

SIMPLIFY (+, -, ●, ÷) the polynomial (put the answer in STANDARD FORM).

5. $(8x^2 - 3x + 6) + (2x^2 - 6x + 3)$ _____

6. $(4x^2 - 5x - 7) - (2x^2 + x - 3)$ _____

7. $4x(x + 3) - 12x$ _____

8. $2x(-7x - 3) + x^2(x + 7)$ _____

9. $(x - 1)(x + 9)$ _____

10. $(3x - 7)(5x - 2)$ _____

11. $(k - 3)(4k^2 - k + 7)$ _____

12. $(x - 5)(x + 5)$ _____

13. $(x + 4)^3$ _____

FACTOR the expression as a GCF times a polynomial. (HINT: $2y + 10 = 2(y + 5)$)

14. $10x^3 + 35$ _____

15. $12y^3 - 18y^2 + 6$ _____

FACTOR the polynomial.

16. $w^2 + 8w + 7$ _____

17. $t^2 - 10t + 25$ _____

18. $x^2 + 2x - 3$ _____

19. $v^2 - 1v - 12$ _____

20. $x^2 - 25$ _____

21. $9z^2 - 6z + 1$ _____

22. $5b^2 + 13b - 6$ _____

23. $12g^2 - 10g - 8$ _____

24. $2x^2 + 14x + 20$ _____

25. $x^3 - 10x^2y + 24xy^2$ _____

Simplify

26. $\frac{2x^2-3x-5}{x^2-1}$ _____