Kerry Ojakian's MTH 28.5 Class
Class Assignment #15

For each experesion, is it a polynomial? - Yes or No?

1. $3x + 5y - 6$

2. $x^2 + x + \frac{6}{x}$

3. $x^2 - 5x + 6$

4. $\sqrt{x} + 2x + 6$

5. $(\frac{3}{5})x - 2 + 3x - 1$

6. $\dfrac{3 + x}{2 + x} + 3x - 5$

Classify the following poynomials as 1) monomials, 2) binomials, 3) trinomials or 4) none of those.

7. $3x + 5y - 6$

8. $x^2 - 5x + 6$

9. $5x + 3$

10. $-3x^3y^2z^3$

11. $3x + 5y$

12. x^2

13. $5x + 3 + 7y - 5xy$

14. $x^3 + 3x - 1$

Circle the terms in each of the following expressions, and find the coefficient of each term.

15. $3x + 5y - 6$

16. $x^2 - 5x + 6$

17. $4x + 4$

18. $-x^2 + x$

19. $x + 2y - 1$

20. x^3

Perform the operation and simplify. Write the answer in descending order of degree.

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

22. $(3x^3 - 4x - 2x^2) + (3x^2 - 6 + x)$

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

24. $(4x^2y + 3xy - 2) + (3xy - 5xy^2 + 6)$

25. $(3x - 4xy - z + x^2) + (-5x^2 + z - 3x)$

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

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

28. $(3x^3 - 4x - 2x^2) - (3x^2 - 6 + x)$

29. $(5x^3 - 2x - 1) - (3x^5 - 5^2)$

30. $(4x^2y + 3xy - 2) - (3xy - 5xy^2 + 6)$

31. $(3x - 4xy - z + x^2) - (-5x^2 + z - 3x)$

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

Evaluate the following (by first simplifying, then evaluating!)

33. $f(x) = 5x^2 + 3x - 5x^2 + x + 1$. Evaluate $f(2)$ and $f(1)$.

34. $f(y) = 8y^3 - 10y - 9 - 7y^3 + 9y + 10$. Evaluate $f(2)$ and $f(1)$.

35. $g(t) = -t^2 - t - 1 + t + 2t^2 + 1$. Evaluate $g(-1)$ and $g(0)$.

36. $h(u) = 3 - 30u^2 + 47u + 15u^2 - 30u + 15u^2 - 17u$. Evaluate $h(2024)$ and $g(-3024)$.