Kerry Ojakian's MTH 28 Class
Class Assignment #2

Evaluate (don't let the fractions scare you!):

1. $\frac{2}{3}+\frac{5}{6}\cdot\frac{2}{5}=$
2. $\left(\frac{1}{2}+\frac{1}{2}\right)\cdot(5)=$
3. $\frac{6}{5}+\frac{1}{10}\cdot(-2)=$
4. $\frac{1}{2}+\left(\frac{1}{2}\right)^2=$
5. $\left(1+\frac{1}{2}\right)^2=$
6. $\left|\frac{2}{3}-\frac{1}{6}\right|=$
7. $-\left(\frac{2}{5}-\frac{1}{10}\right)=$
8. $-\left(\frac{1}{10}-\frac{2}{5}\right)=$
9. $\frac{1}{3}-\frac{1}{6}\div\frac{1}{2}=$
10. $\frac{1}{3}-4\div\frac{1}{2}=$
11. $\frac{7}{8}\cdot\frac{1}{2}+\frac{1}{4}=$
12. $5\cdot\frac{2}{5}+\left(\frac{1}{2}-6\right)=$
13. $\frac{4}{3}\cdot\frac{1}{8}-\left(\frac{1}{2}-1\right)=$
14. Find the area of a square with side length $\frac{5}{3}$:
15. Find the area of a rectangle with width $\frac{7}{2}$ and height $\frac{8}{3}$:
16. Find the perimeter of a square with side length $\frac{10}{3}$:
17. Find the perimeter of a rectangle with width $\frac{5}{2}$ and height $\frac{9}{4}$:
18. Batting Average $=\frac{number\ of\ hits}{number\ of\ at\ bats}$ (usually written as a decimal)
    (a) Vic has a batting average of 0.349 and Mary has a batting average of 0.411. Whose batting average is larger?
    (b) If Vic has a batting average of 0.25 and was at bat 40 times, how many hits did he have?
19. A triangle has a base $\frac{7}{2}$ and a height 5. What is its area?

20. A triangle has a base $\frac{10}{3}$ and a height $\frac{3}{20}$. What is its area?

21. Suppose square is attached to the base of a triangle. The the base of the triangle is 7 and its height is 10. What is the area of the whole object?

Simplify.

22. $x^5x^3 =$

23. $\frac{x^5}{x^3} =$

24. $\frac{x^3}{x^9} =$

25. $\frac{10y^9}{4y^5} =$

26. $x^7y^2x^6y^3 =$

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

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

28. $(3x - 4xy - z + x^2) + (-5x^2 + z - 3x)$

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

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

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

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

Multiply.

33. $2x(x+3) =$
34. $-2x(x-2) =$
35. $-4x^2(-2x^2-5x+6) =$
36. $2xy(x-2y+xy) =$
37. $(3-3x^2+6x)\cdot x^2 =$
38. $-4xy^2(-2x^2y-5) =$

Multiply.

39. $(x+3)(x+2) =$
40. $(x+5)(x-3) =$
41. $(2x-3)(5x-6) =$
42. $(x-3)(x^2-6x-4) =$
43. $(x^2-6x-4)(x-5) =$
44. $(-3x^2-2x+1)(-x^3-5x+6) =$
45. $x(x+3)(x+2) =$
46. $(x+1)(x+2)(x+3) =$

Multiply (special ones ...).

47. $(x+3)^2 =$
48. $(x-3)^2 =$
49. $(x-9)^2 =$
50. $(x-1)^2 =$
51. $(x-4)(x+4) =$
52. $(x+1)(x-1) =$
53. $(a+b)^2 =$
54. $(a-b)^2 =$
55. $(a+b)(a-b) =$