Kerry Ojakian's MTH 28.5 Class
Class Assignment #14

Simplify.

1. $x^5x^3 =$
2. $\dfrac{x^5}{x^3} =$
3. $(xy)^7 =$
4. $\dfrac{x^3}{x^9} =$
5. $\left(\dfrac{x}{y}\right)^3 =$
6. $(xy)^0 =$
7. $\left(\dfrac{x^5}{x^3}\right)^0 =$
8. $\left(\dfrac{x}{y}\right)^{-5} =$
9. $(x^4)^2 =$
10. $(x^3)^{-2} =$
11. $\dfrac{10y^9}{4y^5} =$
12. $x^7y^2x^6y^3 =$

Simplify (a little longer ...).

13. $(x^3y^{-6}z^5)(8x^{-3}yz^4) =$
14. $\dfrac{x^5y^3z^{-2}}{x^{-2}y^5z^{-3}} =$
15. $\left(\dfrac{12x^2y^{-3}}{4x^{-5}}\right)^{-2} =$
16. $(x^{-2}y^{-4}z^2)(8x^{-1}y^2z^3) =$
17. $\dfrac{x^{-5}y^3z^{-2}}{x^2y^3z^{-2}} =$
18. $\left(\dfrac{3x^4y^{-1}}{9x^4y^{-1}}\right)^2 =$

Multiply.

19. $445 \times 10^3 = 445000$ (example)
20. $42965 \times 10^4 =$
21. $153.5 \times 10^3 =$
22. $179.65 \times 10^{-4} =$
23. $215.34 \times 10^{-1} =$
24. $423653 \times 10^{-7} =$
25. $0.003 \times 10^{-1} =$

The following numbers are written in scientific notation. Write them in the usual way (by multiplying).

26. $2.3 \times 10^3 = 2300$ (example)
27. $2.55 \times 10^5 =$
28. $4.534 \times 10^{-4} =$
29. $2.3 \times 10^{-3} =$
30. $1.23 \times 10^4 =$
31. $8.004 \times 10^{-4} =$
32. $1.76 \times 10^8 =$
33. $7.25 \times 10^{-6} =$
34. $2.418 \times 10^{-1} =$

Write the following numbers in scientific notation.

35. $23.3 = 2.33 \times 10^1$ (example)
36. $20355 =$
37. $534.44 =$
38. $0.00003 =$
39. $1.45355 =$
40. $5449994.34 =$
41. $0.001001 =$
42. $255443.234 =$
43. $50000000 =$
44. $24.54 \times 10^4 =$
45. $322 \cdot 10^{-3} =$
46. $534.44 \times 10^{34} =$