CHEMISTRY : MEASUREMENT PRACTICE III

A. Determine the number of significant digits in the following numbers:

_____1) 5600

_____2) 45.00

_____3) 105.0

_____4) 0.00565

_____5) 0.005400

_____6) 89.543

_____7) 5, 056, 300

_____8) 95.0540

_____9) 93,000,000

B. Perform the indicated operations and express your answer to the correct number of significant digits:

_____10) (6.92)(7.9)

_____11) (8.245)(9.00)

_____12) (4.46)/(6.52)

_____13) (9.825)/(8.20)

_____14) (8.95) (9.162)/(4.25) (6.3)

C. Perform the indicated operations and express your answer to the correct number of significant digits:

_____15) 5.50 + 0.528 + 9.2

_____16) 420 + 8900 + 620

_____17) 0.00526 - 0.52

_____18) 820.0 + 19.5 + 6

_____19) 4,285.75 - 520.1 - 386.255

_____20) (0.526) (895) + 20.8

_____21) 3.414 s +10.02 s + 58.325 s + 0.000 98 s

_____22) 1884 kg + 0.94 kg +1.0 kg + 9.778 kg

_____23) 2104.1 m - 463.09 m

_____24) 2.326 h - 0.104 08 h

_____25) 10.19 m x 0.013 m

_____ 26) 140.01 cm x 26.042 cm x 0.0159 cm

_____27) 80.23 m ÷ 2.4 s

_____28) 4.301 kg ÷ 1.9 cm^3

_____29) 3.68 + 7.3645 + 0.5

_____30) 0.243 + 76.720 + 4.6494

_____31) 14.745 - 1.60

_____32) 0.5642 - 0.260

_____33) 6.02 x 2.0

_____34) 0.65 x 427

_____35) 0.022 x 0.467

_____36) 174 ÷ 24

_____37) 420 ÷ 17.5

_____38) 3.0899 mm x 22.4 mm

_____39) 3.4500 cm^2 ÷ 450 cm

_____40. 13.80 cm - 6.0741 cm

D. For each item below determine the number of significant digits in the number or answer to the problem: (don't do the calculation)

_____ 41) 804.58

_____42) 250.00

_____43) 3000

_____44) 10.00 m x 84.767 m

_____45) 0.00300900870

_____46) 400 x 87,488

_____47) 180.0001

_____48) 3.0 x 4.000

_____49) 0.00560

_____50) 0.7600 ÷ 1.50

CHEMISTRY **Scientific Notation Practice II**

A. Express the following numbers in correct scientific notation:

_____1. 8 720 000

_____2. 0.00 000 628

B. Rewrite the following numbers so they are in correct scientific notation:

_____3. 652.9×10^{5}

_____4. $0.00\ 598 \times 10^{-15}$

_____5. $0.0\ 259 \times 10^{8}$

C. Carry out the indicated operations and express your answer in correct scientific notation:

_____6. $(3.04 \times 10^{22}) + (3.04 \times 10^{23})$

_____7. $(6.54 \times 10^{5}) - (2.0 \times 10^{3})$

_____8. $(2.5 \times 10^{3})(3.62 \times 10^{5})$

_____9. $(9.12 \times 10^{1})(6.55 \times 10^{-2})$

_____10. $(3.2 \times 10^{2})(2.0 \times 10^{-5})(3 \times 10^{4})$

_____11. $(3.80 \times 10^{4}) \div (1.25 \times 10^{-3})$

_____12. $$\frac{(2.5 \times 10^{-7})(5.0 \times 10^{-8})}{(9.5 \times 10^{-14})(6.0 \times 10^{8})}$$

_____13. (389 000 000) (0. 000 75)

_____14. (0.000 686 8) ÷ (87 000)

_____15. $$\frac{(3.5 \times 10^{18})(1.47 \times 10^{6})(3.442 \times 10^{-3})(9.97 \times 10^{5})}{(9 \times 10^{31})(6.634 \times 10^{8})(2.7 \times 10^{4})(6.02 \times 10^{23})}$$