Chemistry CP Name: _____

Scientific Notation, Sig. Fig, Conversion and Density Practice Quiz

Express the following numbers in Scientific Notation:

1) 2510 _____
2) 0.0065 _____
3) 46 _____
4) 77000000 _____
5) 0.0102 _____
6) 3400600 _____
7) 0.0230 _____

Express the following in decimal form:

8) 4.77×10^{4} _____
9) 8.41×10^{-6} _____
10) 5.8×10^{1} _____
11) 9.1×10^{0} _____
12) 1.415×10^{-2} _____
13) 8.904×10^{8} _____

Match the exponential number with the metric prefix.

A. 10^{-6} B. 10^{-1} C. 10^{3} D. 10^{9} E. 10^{6} F. 10^{12} G. 10^{-2}

14) _____ kilo
15) _____ deci
16) _____ giga
17) _____ tera
18) _____ mega
19) _____ centi
20) _____ micro

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Name the metric prefix indicated by the following exponents.

21) 10^{12} _____

22) 10^{-9} _____

23) 10^{2} _____

24) 10^{6} _____

25) 10^{-3} _____

26) 10^{-1} _____

27) 10^{2} _____

List the exponent indicated by the following metric prefixes.

28) hecto _____

29) centi _____

30) pico _____

31) nano _____

32) deca _____

Answer the following questions with the correct S.I. Standard unit.

33) What is the unit for measuring length in the S.I system? _____

34) What is the unit for measuring time in the S.I system? _____

35) What is the unit for measuring mass in the S.I system? _____

36) What is the unit for measuring temperature in the S.I system? _____

37) What is the unit for measuring volume in the S.I system? _____

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Convert the following:

38) 42g to mg _____

39) 0.741cm to m _____

40) 8.4 mL to L _____

41) 776 kg to g _____

42) 1005 µL to ml _____

43) 25 kg to mg _____

44) 45000 cm to Gm _____

45) 0.003 TL to nL _____

46) 45 in to ft _____ (12 in = 1 ft)

47) 256 yds to ft _____ (3 ft = 1yd)

48) 389 kg to lbs _____ (2.2 lbs = 1kg)

49) 94 in to cm _____ (2.54 cm = 1 in)

50) 35 sec. to min. _____ (60 sec = 1min)

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State the number of significant figures represented in each of the following numbers:

51) 1.0040 _____

52) 0.00031 _____

53) 1378.9 _____

54) 100 _____

55) 10000.00 _____

Calculate the following, **round the final answer to the correct number of significant figures**:

56) 5.302
3.80
+79.324
56)_____

57) 5.302
-3.80
57)_____

58) 4.657 x 98.003 x 5.87 =
58)_____

59) $(1.3 \times 10^{2})(6.40 \times 10^{-1})$ =
59)_____

60) 8.30 ÷ 0.045 =
60)_____

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Convert the following (2 points each), be sure to SHOW YOUR WORK:

61) 25°C to °F _____

62) -60 °F to K _____

63) 55 °C to K _____

64) 345 K to to °C _____

65) 265°F to °C _____

66) 265 K to °F _____

Equivalence Statements

°F = (1.8 x°C)+32

°C = (°F-32)/1.8

K= °C+ 273

°C= K-273

Chemistry CP
Sci. notation, metric system and conversions Name:_____

The following questions are about density.

67) If I have a sample that has a volume of 33.5 cm^3 and weighs 23.5 grams. What is the density of the object?

68) My sample has a known density of 5.00 grams/ml and I have a 15 gram sample. How much space will this sample occupy?

69) I have a 25 ml sample of a substance with a known density of 14.1 g/cm^3 . What is the mass of my sample?

70) A block has the dimensions of 3.0 cm by 5.0 cm by 2.0 cm. What is the density of the block if it weighs 45 grams? (hint: Volume = LxWxH)

71) An irregular object is placed in 25 ml of water. The new reading on the flask is 45 ml. The recorded mass of the object is 13 grams. What is the density of the object?

72) If I have a sample that has a volume of 3.5 cm^3 and weighs 2.5 grams. What is the density of the object?

73) My sample has a known density of 15.00 grams/cm^3 and I have a 165 gram sample. How much space will this sample occupy?

74) I have a 35 ml sample of a substance with a known density of 2.1 g/cm^3 . What is the mass of my sample?