Math Review for Chemistry

Significant Digit Practice:
How many Sig Figs are in the following numbers?

A)	101	____	F)	0.0070	____	K)	3.00×10^8	____
B)	97	____	G)	0.00701	____	L)	6.022×10^{23}	____
C)	1010	____	H)	12	____	M)	1.60×10^{-19}	____
D)	970.0	____	I)	15.0	____	N)	6.626×10^{-34}	____
E)	0.007	____	J)	10	____	O)	8.3×10^3	____

Rounding Practice
Round the following numbers to 3 and 4 significant digits:

		3 Sig Figs	4 Sig Figs
A)	732.350	_____	_____
B)	732.5	_____	_____
C)	0.23141	_____	_____
D)	0.007667	_____	_____
E)	1 ,578	_____	_____
F)	157 800	_____	_____

Exponents

A)	$10^3 \times 10^2$	____	C)	$10^4/10^7$ ____		E) $10^4 \times 10^7$	____
B)	10×10^3	____	D)	$10^9/10^3$	____	F) $10^{10}/10^2$	____

Scientific Notation
Convert the following to scientific notation.

A)	700	_____	F)	0.000 899	_____
B)	7, 100	_____	G)	123, 000	_____
C)	0.007	_____	H)	0.000 058	_____
D)	5, 001	_____	I)	3, 450	_____
E)	963	_____	J)	0.000 000 82	_____

Math with Significant Digits

Addition/Subtraction

25.25	125.22	3.20×10^5	6.67×10^5
+35.373	− 25.2	$+5.5 \times 10^5$	3.35×10^3
_____	_____	_____	_____

Multiplication/Division

A) 23.0 x 52.25   C) $(5.55 \times 10^7) \times (3.21 \times 10^{-5})$

B) 562/63   D) $(6.89 \times 10^6) / (4.55 \times 10^{-10})$

Name _____   Period _____

Working with Significant Digits

A) What is the sum of the following numbers: 15.0, 15.55, 20.00, and 17.154?

B) What is the density of an object whose mass is 25.00 g and whose volume is 45.0 mL?

C) What is the volume of 15.0 g of gold whose density is 19.32 g/mL

D) What is the volume of a block whose dimensions are 1.00 cm by 12.25 cm by 6.3 cm?

E) A sheet of aluminum (d = 2.70 g/cm^3) has a mass of 0.25 g. Find the volume of it?

Homework
Finish everything on the front page that your teacher did not do and complete the problems below.

1) What is the density of an object whose mass is 70.10 g and whose volume is 23.22 mL?

2) What is the mass of 25.00 mL of Mercury whose density is 13.59 g/cm^3?

3) A sheet of copper has a volume of 0.32 cm^3 and an area of 120. cm^2. What is it's thickness?

4) What is the volume of a sheet of aluminum foil whose mass is 0.22 g?

5) If the aluminum in the previous problem has a length of 10.00 cm and a width of 7.50 cm what is it's thickness?