Sig Fig Rules

To determine the number of significant figures in a number use the following 3 rules:
1.Non-zero digits are always significant
2.Any zeros between two significant digits are significant
3.A final zero or trailing zeros in the decimal portion ONLY are significant
Example: .500 or .632000 the zeros are significant
.006 or .000968 the zeros are NOT significant
For addition and subtraction use the following rules:
1.Count the number of significant figures in the decimal portion ONLY of each number in the problem
2.Add or subtract in the normal fashion
3.Your final answer may have no more significant figures to the right of the decimal than the LEAST number of significant figures in any number in the problem.
For multiplication and division use the following rule:
1.The LEAST number of significant figures in any number of the problem determines the number of significant figures in the answer. (You are now looking at the entire number, not just the decimal portion)
This means you have to be able to recognize significant figures in order to use this rule
Example: 5.26 has 3 significant figures
6.1 has 2 significant figures

No think math method for conversions

#unit^{1} x #unit (converting to) / #unit^{1}
#=number
cancel like units
then multiply and divide then you get your answer with new units

Ideal Gas Law

PV/nT=nRT/nT
P=atm
V=L liters?
n=# of mols
T=Kelvin
R= 0.0821 atm x L / mol x K ---Always divide the numbers underneath

Abbreviations

Atmosphere-atm
Bar-Bar
millimeter of mercury-mmHg
Pascal-pa
Pounds per square inch-psi
Torr-torr

electron configuration

1s
2s 2p
3s 3p 3d
4s 4p 4d 4f
5s 5p 5d 5f
6s 6p 6d 6f
7s 7p 7d 7f
s=2 p=6 d=10 f=14

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