**Chemistry 1 Reference Sheet**

D = m/v c = λν

K = °C + 273 c = Speed of light = 3.0 x 108 m/s

Avogadro's number E = hν

6.022 x 1023 particles = 1 mole

 h = Planck’s constant = 6.626 x 10-34 J·s

Error = Experimental value – Accepted value

 Percent yield = actual yield x 100%

Percent Error = |Error| x 100% theoretical yield

Accepted value

 Specific heat of water = 4.18 J/g·°C

M = mol of solute

 L of solution Heat = mass of substance·specific heat of substance·change in temperature

 H = m·c·∆T

M1V1 = M2V2

PV = nRT

Gas constant, R = 0.0821 L·atm/mol·K

**Electronegativity (using the Pauling Scale)**



**Electronegativity Difference**

|  |  |
| --- | --- |
| <0.5 | Nonpolar |
| 0.5 – 1.7 | Polar covalent |
| >1.7 | Ionic |

**Polyatomic Ions**

C2H3O- Acetate CrO4-2 Chromate NO3- Nitrate

NH4+ Ammonium ion Cr2O7-2Dichromate NO2- Nitrite

CO32- Carbonate CN- Cyanide OH- Hydroxide ion

ClO- Hypochlorite COOH- Formate PO43-  Phosphate

ClO2- Chlorite MnO42- Manganate PO33- Phosphite

ClO3- Chlorate MnO4- Permanganate SO42- Sulfate

ClO4- Perchlorate C2H4- Oxalate SO32- Sulfite