

List of Recipes (Algorithms and Heuristics)

Integer Multiplication	8
Units Conversion	15
Mass Conversion	19
Slope of a Curve	30
Linear Equation Solution	34
Quadratic Equation Solution	35
General One Variable Equation Solution	37
Linear Equation System Solution	39
Derivatives and Integrals	42
The Atomic Mol Map	89
Element Identification and Parameters	95
Aufbau Electronic Configuration	104
Periodic Law	110
Periodic Table Electronic Configuration	113
The Periodic Trend	116
Molecular Mass from Chemical Formula	122
Empirical Formula	123
Molecular Formula	124
Molecular Mol Map	125
Extended Stoichiometry	127
Inorganic Nomenclature	134
Organic Nomenclature	136
Coordination Complex Nomenclature	137
Balancing Chemical Equations	143

Stoichiometry Mol Map	146
Volume Stoichiometry Mol Map	149
Solution Stoichiometry Mol Map	150
Basic Bonding	153
Oxidation Number	156
Molecular Mass Spectrum	158
Lewis Structure	162
Molecular Geometry	166
Molecular Polarity	167
Valence Bond Description	170
Molecular Orbital Aufbau	173
Hess Law	198
Reaction Heats from Formation Heats	200
Reaction Heats from Bond Energies	201
Phase of Matter	225
Gas Law Decision Table	230
Ideal Gas Law	233
Gas Collected Over Water	235
Crystal Structure	241
Crystal Atom Radius	243
Concentration Conversion	249
Solubility	250
Mechanism to Rate Law	259
Empirical Rate Law	262
Arrhenius Parameter	266
Mass Action	273
Bronsted Table	278

Acid Base Formulas	282
Lewis Table	286

