s = Soluble i = Insoluble si = Slightly Sol. d = Decomposes * = Does not exist	Acetate	Bromide	Carbonate	Chlorate	Chloride	Chromate	Hydroxide	Iodide	Nitrate	Oxide	Oxalate	Phosphate	Silicate	Sulfate	Sulfide	Sulfite
Aluminum	s	s	*	s	s	*	i	s	s	i	i	i	i	*	d	*
Ammonium	s	s	s	s	s	s	s	s	s	*	si	s	8	s	s	s
Antimony (III)	*	d	*	*	s	***	d	*	s	i	i	*	*	d	d	*
Barium	S	s	i	s	s	i	s	s	s	s	s	i	s	i	d	I
Bismuth (III)	i	d	*	*	d	*	d	i	d	i	d	i	i	d	i	*
Cadmium (II)	s	s	i	s	s	i	i	s	s	i	i	i	*	s	i	si
Calcium	s	s	i	s	s	s	i	s	s	i	i	i	i	i	i	i
Chromium	s	s	*	*	s	*	i	i	s	i	s	p	*	s	i	i
Cobalt (II)	s	s	i	s	s	i	i	s	s	i	i	i	i	s	i	i
Copper (I)	*	si	i	*	i	s	i	i	*	i	I	*	*	d	i	s
Copper (II)	s	s	d	s	s	s	i	*	s	i	I	i	*	s	I	*
Hydrogen	s	s	s	s	s	d	H_2O	s	s	S	*	s	s	s	S	s
Iron (II)	s	s	i	*	s	i	i	s	s	I	I	i	i	s	i	i
Iron (III)	i	s	*	*	s	i	i	*	s	I	I	i	i	si	i	i
Lead (II)	s	si	i	s	si	i	i	i	s	I	I	i	i	i	i	i
Lead (IV)	d	*	*	*	d	i	*	*	*	i	I	*	i	*	*	i
Magnesium	s	s	i	s	s	s	i	s	s	i	I	i	i	s	d	s
Manganese	s	s	i	*	s	*	i	s	s	i	I	*	*	s	i	i
Mercury (I)	si	i	i	si	i	si	*	si	sd	i	I	id	*	I	i	*
Mercury (II)	s	si	i	s	s	i	i	i	s	i	i	si	*	d	i	*
Nickel	s	s	i	s	s	*	i	s	s	I	s	i	s	s	i	i
Potassium	s	s	s	s	s	s	s	s	s	d	s	s	s	s	s	s
Silver	s	i	i	s	i	s	*	i	s	i	i	i	*	si	i	i
Sodium	si	s	s	s	s	s	s	s	s	d	s	s	s	s	s	s
Strontium	s	s	i	s	s	i	i	s	s	i	i	i	i	i	i	i
Tin (II)	*	*	*	*	s	i	i	s	*	i	i	*	*	s	i	i
Tin (IV)	*	sd	*	*	sd	i	*	sd	*	i	i	i	*	d	i	i
Zinc	s	s	i	s	s	s	i	s	d	i	i	i	i	s	i	i

Solubility is relative. This chart tells whether a recognizable precipitate will form in a Double Replacement Reaction with 1 M concentrations.

Activity Series

Lithium
Potassium
Barium
Calcium
Sodium
Magnesium
Aluminum
Manganese
Zinc
Chromium
Iron
Cadmium
Cobalt
Nickel
Tin
Lead
Hydrogen
Antimony
Bismuth
Arsenic
Copper
Mercury
Silver
Platinum
Gold

Molecular Prefixes

1: mono-
2: di-
3: tri-
4: tetra-
5: penta-
6: hexa-
7: hepta-
8: octa-
9: nona-
10: deca-

Roman Numerals

I = 1 VI = 6
II = 2 VII = 7
III = 3 VIII = 8
IV = 4 IX = 9
V = 5 X = 10

Conversions

1 inch = 2.54 cm
1 mi = 5280 ft
1 mi = 1.61 km
1 lb = 454 g
1 gal = 3785 mL
1 mL = 1 cm^3
1 = 1 dm^3
1 Mm = 10^6m
1 km = 1000 m
1 m = 100 cm
1 m = 1000 mm

Acids and Bases

$pH = -\log [H^+]$
$10^{-pH} = [H_3O^+]$
$pOH = -\log [OH^-]$
$10^{-pOH} = [OH^-]$
$1 \times 10^{-14} = [OH^-] \times [H_3O^+]$

Wave Equations

$^oC = {}^oK - 273$
$^oK = {}^oC + 273$

$E = h \times \nu$
$c = \lambda \times \nu$
$E = mc^2$
$c = 3.0 \times 10^8$ m/s
$h = 6.6262 \times 10^{-34}$ js

Calorimetry and Heat

$q = m \times Cp \times \Delta T$

Specific Heat of H_2O

4.184 J / g ^oC

Gases

$PV = nRT$ $P_t = P_1 + P_2 + P_3 + \ldots\ldots$

1 atm = 760 mmHg = 760 torr = 14.7 p.s.i. = 101 kPa

$R = 0.0821 \frac{atm * L}{mol * K}$ $R = 8.31 \frac{kPa * L}{mol * K}$

STP = 1 atm & 273 ^oK