Cheatography

# Chem Rules and Formulas Cheat Sheet

by Schutte via cheatography.com/30544/cs/9121/

## Chapter 1 Formulas

| |
|---|
| T(°C) = T(K) - 273.15 |
| T(°F) = 9/5 [T(°C)] + 32 |
| Density = mass/volume |
| average atomic weight = (exact mass of isotope) ( fractional abundance of isotope) + ..... |

## Chapter 1 Conversions

| | |
|---|---|
| 1 in | 2.54 cm |
| 1 mi | 5280 ft |

## Diatomic Molecules

| |
|---|
| H2 |
| N2 |
| O2 |
| F2 |
| Cl2 |
| Br2 |
| I2 |

## Polyatomic Ions

## Chapter 4 Oxidation Numbers

| | |
|---|---|
| element by itself | 0 |
| Group 1A | +1 |
| Group 2A | +2 |
| Halogen | usually -1 / positive with Oxygen |
| Monatomic Ion | ion charge |
| H | +1 with nonmetals / -1 with metals |
| O | usually -2 / -1 in peroxide (O2) |
| F | ALWAYS -1 |

## Chapter 4 Solubility Rules

| exceptions | soluble ionic compounds | insoluble ionic compounds | exceptions |
|---|---|---|---|
| | $Na^+$ | $OH^-$ | $Na^+$, $K^+$, $Ba^{2+}$ |
| | $K^+$ | $O^{2-}$ | $Na^+$, $K^+$, $Ba^{2+}$ |
| | $NH4^+$ | $S^{2-}$ | $Na^+$, $K^+$, $NH4^+$, $Ba^+$ |
| | $NO3^-$ | $CO3^{2-}$ | $Na^+$, $K^+$, $NH4^+$ |

## Chapter 4 Solubility Rules (cont)

| | | | |
|---|---|---|---|
| | $CH3CO2^-$ | $PO4^{3-}$ | $Na^+$, $K^+$, $NH4^+$ |
| | $ClO3^-$ | | |
| | $ClO4^-$ | | |
| $Pb^{2+}$, $Ag^+$, $Hg2^{2+}$ | $Cl^-$ | | |
| $Pb^{2+}$, $Ag^+$, $Hg2^{2+}$ | $Br^-$ | | |
| $Pb^{2+}$, $Ag^+$, $Hg2^{2+}$ | $I^-$ | | |
| $Ca^+$, $Sr^+$, $Ba^{2+}$, $Pb^+$ | $F^-$ | | exceptions |
| $Ca^+$, $Sr^+$, $Ba^{2+}$, $Pb^+$ | $SO4^{2-}$ | | |


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