Chemistry for Allied health formula sheet

1 mol atoms = $6.022 * 10^{23}$ atoms	
$1\ cm^3 = 1\ mL$	
$1000\ cal = 1\ Kcal = 1\ Cal$	
$1\ cal = 4.184\ J$	
$STP = 1\ atm\ and\ 0°C$	
$1\ mol\ of\ gas\ at\ STP = 22.4L$	

Prefix	Symbol	Factor
Giga	G	10^9
Mega	M	10^6
Kilo	K	10^3
centi	C	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}

Fat
$-\ contains\ 9\ Calories(Kcal)\ per\ gram$
$Protiens$
$-\ contains\ 4\ Calories(Kcal)\ per\ gram$
$Carbohydrates$
$-\ contains\ 4\ Calories(Kcal)\ per\ gram$

$P_1V_1 = P_2V_2$ $\qquad \frac{P_1}{T_1} = \frac{P_2}{T_2}$ $\qquad \frac{V_1}{T_1} = \frac{V_2}{T_2}$ $\qquad \frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$ $\qquad P_{total} = P_1 + P_2 + P_3 + \cdots + P_n$

$PV = nRT$ $\qquad Density = \frac{mass}{volume}$ $\qquad °C = \frac{5}{9}(°F - 32)$ $\qquad °F = (\frac{9}{5} * °C) + 32$

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$K = °C + 273$ $M = \frac{moles}{L\ solution}$ $-\log[H_3O^+] = pH$ $-\log[OH^-] = pOH$

$[OH^-] \cdot [H_3O^+] = K_w$ $[H_3O^+] = 10^{-pH}$ $K_w@25°C = 10^{-14}M$ $pH < 7\ is\ acidic$

$pH = 7\ is\ neutral$ $pH > 7\ is\ basic$ $\%\ ^{mass}/_{volume} = \frac{g\ solute}{mL\ solution} * 100$

$Equivalents\ (eq) = moles\ ions * charge\ of\ ion$

Name	Formula	Name	Formula
Acetate	$C_2H_3O_2^-$	Phosphate	PO_4^{3-}
Carbonate	CO_3^{2-}	Ammonium	NH_4^+
Bicarbonate	HCO_3^-	Chlorite	ClO_2^-
Hydroxide	OH^-	Chlorate	ClO_3^-
Nitrite	NO_2^-	Sulfite	SO_3^{2-}
Nitrate	NO_3^-	Sulfate	SO_4^{2-}
Cyanide	CN^-		

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