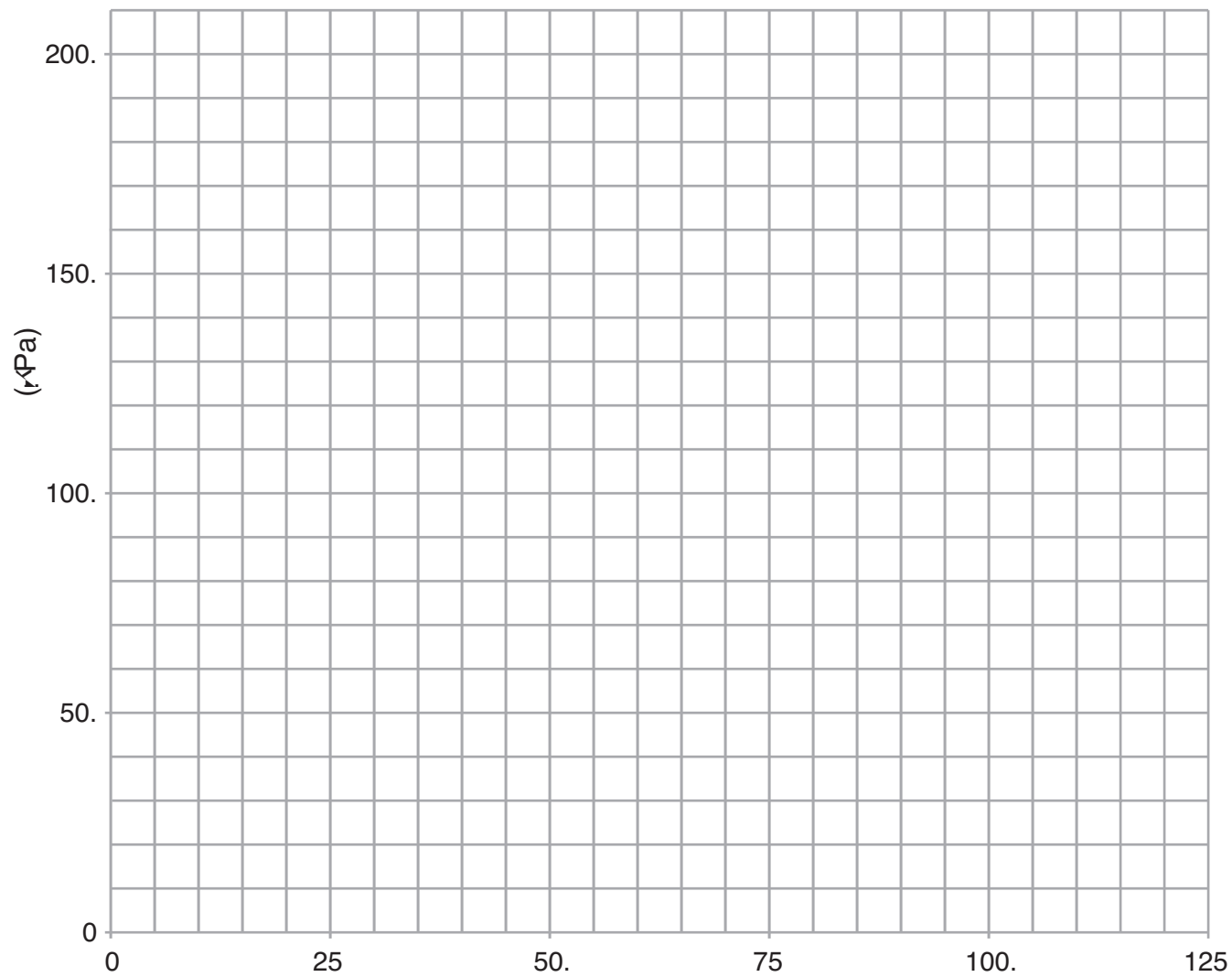




<b>Ions That Form <i>Soluble</i> Compounds</b>	<b>Exceptions</b>
$\text{Li}^+$ $\text{Na}^+$ $\text{K}^+$	
$\text{NH}_4^+$	
$\text{NO}_3^-$ $\text{ClO}_4^-$	



**Table H**  
**Vapor Pressure of Four Liquids**





**Table K**  
**Common Acids**

**Table N**

**Table L**  
**Common Bases**

## Table O

Name	General Formula	Examples	
		Name	Structural Formula
/ / /		/ / /	
/ / /		/ / /	
/ / /		/ / /	

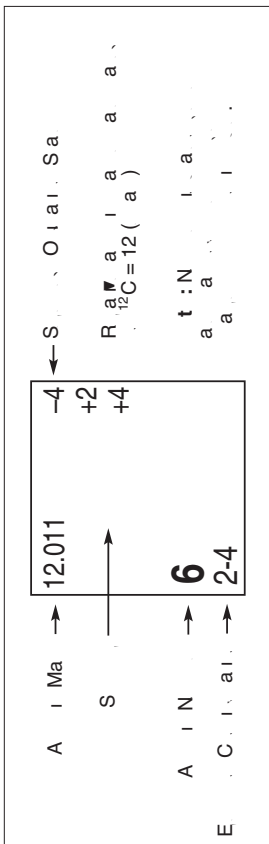
**Table R**  
**Organic Functional Groups**

<b>Class of Compound</b>	<b>Functional Group</b>	<b>General Formula</b>	<b>Example</b>
		$R$	
		$R$	
		$R$	
		$R$ $R'$	
		$R$ $R'$	



**ft**

4.00260 0  
2 2



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1	1.00794 +1 -1	6.941 +1 9.01218 +2	22.98977 +1 24.305 +2	39.0983 +1 40.08 +2	44.9559 +2 44.9559 +2	51.966 +2 51.966 +2	54.9380 +2 54.9380 +2	55.845 +2 55.845 +2	58.9332 +2 58.9332 +2	58.683 +2 58.683 +2	63.546 +2 63.546 +2	65.409 +2 65.409 +2	69.723 +3 69.723 +3	72.64 +2 72.64 +2	74.9216 +2 74.9216 +2	78.96 +2 78.96 +2	79.904 -1 79.904 -1	83.788 +2 83.788 +2		
2	3 2-1	4 2-2	21 2-8-9-2	22 2-8-10-2	23 2-8-11-2	24 2-8-13-1	25 2-8-13-2	26 2-8-14-2	27 2-8-15-2	28 2-8-16-2	29 2-8-18-1	30 2-8-18-2	31 2-8-18-3	32 2-8-18-4	33 2-8-18-5	34 2-8-18-6	35 2-8-18-7	36 2-8-18-8	10 2-8	
3	11 2-8-1	12 2-8-2	88.9059 +2 88.9059 +2	91.224 +3 91.224 +3	95.94 +3 95.94 +3	98 +6 98 +6	101.07 +4 101.07 +4	102.906 +3 102.906 +3	106.42 +3 106.42 +3	107.868 +4 107.868 +4	107.868 +4 107.868 +4	112.41 +2 112.41 +2	114.818 +3 114.818 +3	118.71 +2 118.71 +2	121.760 -3 121.760 -3	127.60 -2 127.60 -2	128.904 -1 128.904 -1	131.29 0 131.29 0	39.948 0 39.948 0	
4	19 2-8-8-1	20 2-8-8-2	21 2-8-9-2	22 2-8-10-2	23 2-8-11-2	24 2-8-13-1	25 2-8-13-2	26 2-8-14-2	27 2-8-15-2	28 2-8-16-2	29 2-8-18-1	30 2-8-18-2	31 2-8-18-3	32 2-8-18-4	33 2-8-18-5	34 2-8-18-6	35 2-8-18-7	36 2-8-18-8	10 2-8	
5	37 2-8-18-8-1	3 2-8-18-8-2	38 2-8-18-9-2	40 2-8-18-10-2	41 2-8-18-12-1	42 2-8-18-13-1	43 2-8-18-13-2	44 2-8-18-15-1	45 2-8-18-16-1	46 2-8-18-18	47 2-8-18-18-1	4 2-8-18-18-2	48 2-8-18-18-3	50 2-8-18-18-4	51 2-8-18-18-5	52 2-8-18-18-6	53 2-8-18-18-7	54 2-8-18-18-8	36 2-8-18-8	10 2-8
6	55 2-8-18-18-8-1	56 2-8-18-18-8-2	57 2-8-18-18-9-2	72 2-8-18-10-2	73 2-8-18-11-2	74 2-8-18-12-2	75 2-8-18-13-2	76 2-8-18-14-2	77 2-8-18-15-2	7 2-8-18-17-1	78 2-8-18-18-1	0 2-8-18-18-2	1 2-8-18-18-3	2 2-8-18-18-4	3 2-8-18-18-5	4 2-8-18-18-6	5 2-8-18-18-7	6 2-8-18-18-8	10 2-8	18
7	7 2-8-32-18-8-1	8 2-8-32-18-8-2	9 2-8-32-18-9-2	104 2-8-32-18-10-2	105 2-8-32-18-11-2	106 2-8-32-18-12-2	107 2-8-32-18-13-2	10 2-8-32-14-2	109 2-8-32-15-2	110 2-8-32-17-1	111 2-8-32-18-1	112 2-8-32-18-2	113** 2-8-32-18-3	114 2-8-32-18-4	115 2-8-32-18-5	116 2-8-32-18-6	117 2-8-32-18-7	11 2-8-32-18-8	103 2-8	18

140.116 +3 140.908 +4	144.24 +3	150.36 +3	157.25 +3	158.925 +3	162.500 +3	164.830 +3	167.259 +3	168.934 +3	173.04 +3	174.9688 +3
5	60	61	62	63	64	65	66	67	70	71
232.038 +4 231.036 +5	238.029 +5	237 +3	243 +3	244 +3	247 +3	247 +3	251 +3	252 +3	259 +2	262 +2
90	91	92	93	94	95	96	97	99	102	103

\* ...  
\*\* ...  
S : C, CH, P, 91, 2010 2011, CRC P

**Table S**  
**Properties of Selected Elements**

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling Point	Density**	Atomic Radius
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								

Atomic Number	Symbol	Name	First Ionization Energy	Electro-negativity	Melting Point	Boiling* Point	Density**	Atomic Radius
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
<b>Elements 58-71 have been omitted.</b>								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
<b>Elements 90 and above have been omitted.</b>								

\* ...

\*\* ...

S ... : C, CH ...

... G m ... , 91 ... , 2010 2011, CRC P

**Table T**  
**Important Formulas and Equations**

<b>Density</b>	$\rho = \frac{m}{V}$
<b>Mole Calculations</b>	$n = \frac{m}{M}$
<b>Percent Error</b>	$\% \text{ Error} = \frac{ \text{Experimental} - \text{Theoretical} }{\text{Theoretical}} \times 100$
<b>Percent Composition</b>	$\% \text{ Composition} = \frac{\text{mass of element}}{\text{total mass}} \times 100$
<b>Concentration</b>	$M = \frac{n}{V}$
	$m = \rho \times V$
<b>Combined Gas Law</b>	$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$
<b>Titration</b>	$M_A V_A = M_B V_B$
<b>Heat</b>	$Q = C \Delta T$ $H = C \times m \times \Delta T$ $H = H_f + H_v + H_c$
<b>Temperature</b>	$T_C = \frac{5}{9}(T_F - 32)$