

Periodic Table of the Elements																																																																																																																																																		
Atomic Number Symbol Name Atomic Mass																																																																																																																																																		
<table><tr><td>1 1A 1A H Hydrogen 1.008</td><td>2 IIA 2A He Helium 4.003</td><td colspan="14"></td><td>18 VIIIA 8A Ar Argon 39.948</td></tr><tr><td>3 Li Lithium 6.941</td><td>4 Be Beryllium 9.012</td><td>5 B Boron 10.811</td><td>6 C Carbon 12.011</td><td>7 N Nitrogen 14.007</td><td>8 O Oxygen 15.999</td><td>9 F Fluorine 18.998</td><td>10 Ne Neon 20.180</td><td colspan="10"></td><td>18 VIIIA 8A Ar Argon 39.948</td></tr><tr><td>11 Na Sodium 22.990</td><td>12 Mg Magnesium 24.305</td><td>13 Al Aluminum 26.982</td><td>14 Si Silicon 28.086</td><td>15 P Phosphorus 30.974</td><td>16 S Sulfur 32.065</td><td>17 Cl Chlorine 35.453</td><td>18 Ar Argon 39.948</td><td colspan="10"></td><td>18 VIIIA 8A Ar Argon 39.948</td></tr><tr><td>19 K Potassium 39.098</td><td>20 Ca Calcium 40.078</td><td>21 Sc Scandium 44.956</td><td>22 Ti Titanium 47.88</td><td>23 V Vanadium 50.942</td><td>24 Cr Chromium 51.996</td><td>25 Mn Manganese 54.938</td><td>26 Fe Iron 55.845</td><td>27 Co Cobalt 58.933</td><td>28 Ni Nickel 58.693</td><td>29 Cu Copper 63.546</td><td>30 Zn Zinc 65.38</td><td>31 Ga Gallium 69.723</td><td>32 Ge Germanium 72.631</td><td>33 As Arsenic 74.922</td><td>34 Se Selenium 78.971</td><td>35 Br Bromine 79.904</td><td>36 Kr Krypton 83.798</td></tr><tr><td>37 Rb Rubidium 85.468</td><td>38 Sr Strontium 87.62</td><td>39 Y Yttrium 88.906</td><td>40 Zr Zirconium 91.224</td><td>41 Nb Niobium 92.906</td><td>42 Mo Molybdenum 95.95</td><td>43 Tc Technetium 98.907</td><td>44 Ru Ruthenium 101.07</td><td>45 Rh Rhodium 102.906</td><td>46 Pd Palladium 106.42</td><td>47 Ag Silver 107.868</td><td>48 Cd Cadmium 112.414</td><td>49 In Indium 114.818</td><td>50 Sn Tin 118.711</td><td>51 Sb Antimony 121.760</td><td>52 Te Tellurium 127.6</td><td>53 I Iodine 126.904</td><td>54 Xe Xenon 131.294</td></tr><tr><td>55 Cs Cesium 132.905</td><td>56 Ba Barium 137.328</td><td>57-71 Lanthanide Series</td><td>72 Hf Hafnium 178.49</td><td>73 Ta Tantalum 180.948</td><td>74 W Tungsten 183.84</td><td>75 Re Rhenium 186.207</td><td>76 Os Osmium 190.23</td><td>77 Ir Iridium 192.22</td><td>78 Pt Platinum 195.08</td><td>79 Au Gold 196.967</td><td>80 Hg Mercury 200.59</td><td>81 Tl Thallium 204.383</td><td>82 Pb Lead 207.2</td><td>83 Bi Bismuth 208.980</td><td>84 Po Polonium [209]</td><td>85 At Astatine [210]</td><td>86 Rn Radon 222.018</td></tr><tr><td>87 Fr Francium [223]</td><td>88 Ra Radium 226.025</td><td>89-103 Actinide Series</td><td>104 Rf Rutherfordium [261]</td><td>105 Db Dubnium [262]</td><td>106 Sg Seaborgium [266]</td><td>107 Bh Bohrium [264]</td><td>108 Hs Hassium [277]</td><td>109 Mt Meitnerium [268]</td><td>110 Ds Darmstadtium [271]</td><td>111 Rg Roentgenium [280]</td><td>112 Cn Copernicium [285]</td><td>113 Nh Nihonium [286]</td><td>114 Fl Flerovium [289]</td><td>115 Mc Moscovium [289]</td><td>116 Lv Livermorium [293]</td><td>117 Ts Tennessine [294]</td><td>118 Og Oganesson [294]</td></tr></table>																		1 1A 1A H Hydrogen 1.008	2 IIA 2A He Helium 4.003															18 VIIIA 8A Ar Argon 39.948	3 Li Lithium 6.941	4 Be Beryllium 9.012	5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180											18 VIIIA 8A Ar Argon 39.948	11 Na Sodium 22.990	12 Mg Magnesium 24.305	13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948											18 VIIIA 8A Ar Argon 39.948	19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.88	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.631	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798	37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294	55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon 222.018	87 Fr Francium [223]	88 Ra Radium 226.025	89-103 Actinide Series	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [277]	109 Mt Meitnerium [268]	110 Ds Darmstadtium [271]	111 Rg Roentgenium [280]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]		
1 1A 1A H Hydrogen 1.008	2 IIA 2A He Helium 4.003															18 VIIIA 8A Ar Argon 39.948																																																																																																																																		
3 Li Lithium 6.941	4 Be Beryllium 9.012	5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180											18 VIIIA 8A Ar Argon 39.948																																																																																																																																
11 Na Sodium 22.990	12 Mg Magnesium 24.305	13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948											18 VIIIA 8A Ar Argon 39.948																																																																																																																																
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.88	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.631	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798																																																																																																																																	
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294																																																																																																																																	
55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [210]	86 Rn Radon 222.018																																																																																																																																	
87 Fr Francium [223]	88 Ra Radium 226.025	89-103 Actinide Series	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [277]	109 Mt Meitnerium [268]	110 Ds Darmstadtium [271]	111 Rg Roentgenium [280]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]																																																																																																																																	
<table><tr><td>57 La Lanthanum 138.905</td><td>58 Ce Cerium 140.116</td><td>59 Pr Praseodymium 140.908</td><td>60 Nd Neodymium 144.242</td><td>61 Pm Promethium 144.913</td><td>62 Sm Samarium 150.36</td><td>63 Eu Europium 151.964</td><td>64 Gd Gadolinium 157.25</td><td>65 Tb Terbium 158.925</td><td>66 Dy Dysprosium 162.500</td><td>67 Ho Holmium 164.930</td><td>68 Er Erbium 167.259</td><td>69 Tm Thulium 168.934</td><td>70 Yb Ytterbium 173.054</td><td>71 Lu Lutetium 174.967</td></tr><tr><td>89 Ac Actinium 227.028</td><td>90 Th Thorium 232.038</td><td>91 Pa Protactinium 231.036</td><td>92 U Uranium 238.029</td><td>93 Np Neptunium 237.048</td><td>94 Pu Plutonium 244.064</td><td>95 Am Americium 243.061</td><td>96 Cm Curium 247.070</td><td>97 Bk Berkelium 247.070</td><td>98 Cf Californium 251.080</td><td>99 Es Einsteinium [254]</td><td>100 Fm Fermium [257]</td><td>101 Md Mendelevium 258.1</td><td>102 No Nobelium 259.101</td><td>103 Lr Lawrencium [262]</td></tr></table>																		57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.242	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.054	71 Lu Lutetium 174.967	89 Ac Actinium 227.028	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium 243.061	96 Cm Curium 247.070	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium [254]	100 Fm Fermium [257]	101 Md Mendelevium 258.1	102 No Nobelium 259.101	103 Lr Lawrencium [262]																																																																																																			
57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.242	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.054	71 Lu Lutetium 174.967																																																																																																																																				
89 Ac Actinium 227.028	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium 243.061	96 Cm Curium 247.070	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium [254]	100 Fm Fermium [257]	101 Md Mendelevium 258.1	102 No Nobelium 259.101	103 Lr Lawrencium [262]																																																																																																																																				