	1								
1	1 1+ hydrogen 1.01	2	meta meta		atomic numbe symbo nami atomic mass			than t one ost	
2	3 Li lithium 6.94	4 Be beryllium 9.01		0.00	atorino mao	10.0	0		
3	11 <b>Na</b> sodium 22.99	12 Mg 2+ magnesium 24.31	3	4	5	6	7	8	9
4	19 K 1+ potassium 39.10	20 <b>Ca</b> calcium 40.08	21 <b>Sc</b> scandium 44.96	22 <b>Ti</b> <sup>4+</sup> <sub>3+</sub> titanium 47.87	23 <b>V</b> <sup>5+</sup> <sub>4+</sub> vanadium 50.94	24 <b>Cr</b> 3+ chromium 52.00	25 <b>Mn</b> 4+ manganese 54.94	Fe 3+ iron 55.85	27 <b>Co</b> 2+ 3+ cobalt 58.93
5	37 <b>Rb</b> rubidium 85.47	38 <b>Sr</b> 2+ strontium 87.62	39 <b>Y</b> 3+ yttrium 88.91	40 <b>Zr</b> zirconium 91.22	41 <b>Nb</b> 3+ niobium 92.91	Mo 6+ molybdenum 95.94	43 <b>TC</b> 7+ technetium (98)	44 <b>Ru</b> 3+ ruthenium 101.07	45 <b>Rh</b> rhodium 102.91
6	55 <b>Cs</b> cesium 132.91	56 <b>Ba</b> barium 137.33	57–71	72 <b>Hf</b> 4+ hafnium 178.49	73 <b>Ta</b> tantalum 180.95	74 <b>W</b> 6+ tungsten 183.84	75 <b>Re</b> rhenium 186.21	76 <b>Os</b> osmium 190.23	77 <b>Ir</b> iridium  192.22
7	87 1+ Fr francium (223)	88 Ra radium (226)	89–103	Rf rutherfordium (261)	105 <b>Db</b> dubnium (262)	Sg seaborgium (266)	Bh bohrium (264)	HS hassium (277)	109 Mt meitnerium (268)
		6	La lanthanum 138.91	cerium 140.12	Pr praseodymium 140.91	Nd neodymium 144.24	Pm sromethium (145)	samarium 150.36	europium 151.96
		7	Ac actinium (227)	90 <b>Th</b> thorium 232.04	Pa 4+ protactinium 231.04	92 <b>U</b> 4+ uranium 238.03	Np neptunium (237)	Pu 6+ plutonium (244)	95 <b>Am</b> <sup>3+</sup> americium (243)

								18
			13	14	15	16	17	2 helium 4.00
			5 <b>B</b>	6 C	7 3- nitrogen	8 2- oxygen	9 1-	10 Ne
			10.81	12.01	14.Ŏ1	16.00	19.00	20.18
			<sup>13</sup> <b>AI</b> <sup>3+</sup>	<sup>14</sup> <b>Si</b>	<sup>15</sup> <b>P</b> <sup>3-</sup>	16 <b>S</b> 2-	17 G 1-	18 Ar
10	11	12	aluminum 26.98	silicon 28.09	phosphorus 30.97	su <b>l</b> phur 32.07	chlorine 35.45	argon 39.95
Ni 3+	<sup>29</sup> Cu <sup>2+</sup>	<sup>30</sup> <b>Zn</b> <sup>2+</sup>	<sup>31</sup> Ga <sup>3+</sup>	<sup>32</sup> <b>Ge</b> <sup>4+</sup>	<sup>33</sup> <b>As</b> <sup>3-</sup>	<sup>34</sup> Se <sup>2-</sup>	35 <b>Br</b> 1-	36 Kr
nicke <b>l</b> 58.69	copper 63.55	zinc 65.41	gallium 69.72	germanium 72.64	arsenic 74.92	selenium 78.96	bromine 79.90	krypton 83.80
<sup>46</sup> Pd <sup>2+</sup>	47 <b>Ag</b> 1+	<sup>48</sup> Cd <sup>2+</sup>	<sup>49</sup> In <sup>3+</sup>	<sup>50</sup> Sn <sup>4+</sup>	<sup>51</sup> Sb <sup>3+</sup>	<sup>52</sup> <b>Te</b> <sup>2-</sup>	53 <b>I</b> 1-	54 <b>X</b> @
pa <b>ll</b> adium 106.42	si <b>l</b> ver 107.87	cadmium 112.41	indium 114.82	tin 118.71	antimony 121.76	tellurium 127.60	iodine 126.90	xenon 131.29
78 Pt 2+	<sup>79</sup> <b>Au</b> <sup>3+</sup>	80 <b>Hg</b> 1+	81 <b>TI</b> 3+	<sup>82</sup> <b>Pb</b> <sup>2+</sup>	83 <b>Bi</b> 5+	84 <b>Po</b> 4+	85 <b>At</b> 1-	86 RM
platinum 195.08	go <b>l</b> d 196.97	mercury 200.59	thallium 204.38	lead 207.21	bismuth 208.98	polonium (209)	astatine (210)	radon (222)
110 <b>D</b> C	111 Da	112 	113	114 	115	116	117	118
DS darmstadtium (271)	Rg roentgenium (272)	Uub ununbium (285)	Uut ununtrium (284)	Uuq ununquadium (289)	Uup ununpentium (288)	Uuh ununhexium (293)	Uus ununseptium (?)	Uuo ununoctiui (294)

<sup>64</sup> <b>Gd</b> <sup>3+</sup>	<sup>65</sup> <b>Tb</b> <sup>3+</sup>	66 <b>Dy</b> 3+	67 <b>Ho</b> 3+	<sup>68</sup> <b>Er</b> <sup>3+</sup>	<sup>69</sup> <b>Tm</b> <sup>3+</sup>	<sup>70</sup> <b>Yb</b> <sup>3+</sup> <sub>2+</sub>	71 <b>Lu</b> 2+
gadolinium	terbium	dysprosium	ho <b>l</b> mium	erbium	thulium	ytterbium	lutetium
157.25	158.93	162.50	164.93	167.26	168.93	173.04	174.97
<sup>96</sup> Cm <sup>3+</sup>	97 <b>Bk</b> 3+	98 <b>Cf</b> 3+	99 <b>Es</b> 3+	<sup>100</sup> Fm <sup>3+</sup>	<sup>101</sup> <b>Md</b> <sup>2+</sup>	<sup>102</sup> <b>No</b> <sup>2+</sup> 3+	<sup>103</sup> Lr <sup>3+</sup>
curium	berkelium	californium	einsteinium	fermium	mendelevium	nobe <b>l</b> ium	lawrencium
(247)	(247)	(251)	(252)	(257)	(258)	(259)	(262)