

# Periodic Table of the Elements

shells (energy levels)

I A

1+

hydrogen	1
H	1.00794(7)

II A

2+

lithium	3	beryllium	4
Li	6.941(2)	Be	9.012182(3)

2

sodium	11	magnesium	12
Na	22.989770(2)	Mg	24.3050(6)

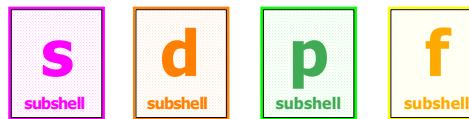
potassium	19	calcium	20
K	39.0983(1)	Ca	40.078(4)

rubidium	37	strontium	38
Rb	85.4678(3)	Sr	87.62(1)

caesium	55	barium	56
Cs	132.90545(2)	Ba	137.327(7)

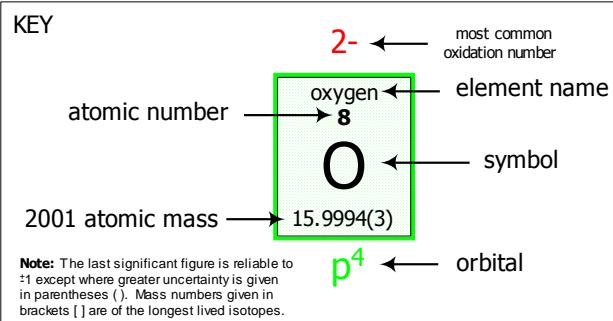
7

francium	87	radium	88
Fr	[223]	Ra	[226]



Note:

Atomic number = # of protons = # of electrons (in a neutral atom)  
Atomic mass (rounded to nearest integer) = # of protons + # of neutrons



VIII A

helium	2
He	4.002602(2)

1

III A    IV A    V A    VI A    VII A

3+

3-

2-

1-

boron	5	carbon	6	nitrogen	7	oxygen	8	fluorine	9	neon	10
B	10.811(7)	C	12.0107(8)	N	14.00674(7)	O	15.9994(3)	F	18.9984032(5)	Ne	20.1797(6)
aluminium	13	silicon	14	phosphorus	15	sulfur	16	chlorine	17	argon	18
Al	26.981538(2)	Si	28.0855(3)	P	30.973761(2)	S	32.065(5)	Cl	35.453(2)	Ar	39.948(1)
gallium	31	germanium	32	arsenic	33	selenium	34	bromine	35	krypton	36
Ga	69.723(1)	Ge	72.64(1)	As	74.92160(2)	Se	78.96(3)	Br	79.904(1)	Kr	83.798(2)
indium	49	tin	50	antimony	51	tellurium	52	iodine	53	xenon	54
In	114.818(3)	Sn	118.710(7)	Sb	121.760(1)	Te	127.60(3)	Xe	126.9047(3)	I	131.293(6)
thallium	81	lead	82	bismuth	83	polonium	84	astatine	85	radon	86
Tl	204.3833(2)	Pb	207.2(1)	Bi	208.98039(2)	Po	[209]	At	[210]	Rn	[222]
nihonium	113	flerovium	114	moscovium	115	livemorium	116	tennesine	117	oganesson	118
Nh	[284]	Fl	[289]	Mc	[288]	Lv	[293]	Ts	[294]	Og	[294]

shells (energy levels)

1

2

3

4

5

6

7

s <sup>1</sup>	s <sup>2</sup>	d <sup>1</sup>	d <sup>2</sup>	d <sup>3</sup>	d <sup>4</sup>	d <sup>5</sup>	d <sup>6</sup>	d <sup>7</sup>	d <sup>8</sup>	d <sup>9</sup>	d <sup>10</sup>	p <sup>1</sup>	p <sup>2</sup>	p <sup>3</sup>	p <sup>4</sup>	p <sup>5</sup>	p <sup>6</sup>		
* lanthanoids		lanthanum	57	cerium	58	praseodymium	59	neodymium	60	promethium	61	samarium	62	europerium	63	gadolinium	64	terbium	65
** actinoids		La	138.9055(2)	Ce	140.116(1)	Pr	140.90765(2)	Nd	144.24(3)	Pm	[145]	Sm	150.36(3)	Eu	151.964(1)	Gd	Tb	Dy	Ho
		actinium	89	thorium	90	protactinium	91	uranium	92	neptunium	93	plutonium	94	americium	95	curium	96	berkelium	97
		Ac	[227]	Th	232.0381(1)	Pa	231.03588(2)	U	238.02891(3)	Np	[237]	Pu	[244]	Am	[243]	Cm	[247]	Cf	[251]
		f <sup>1</sup>	f <sup>2</sup>	f <sup>3</sup>	f <sup>4</sup>	f <sup>5</sup>	f <sup>6</sup>	f <sup>7</sup>	f <sup>8</sup>	f <sup>9</sup>	f <sup>10</sup>	f <sup>11</sup>	f <sup>12</sup>	f <sup>13</sup>	f <sup>14</sup>				