

1 1 <b>H</b> hydrogen 1.0080 ± 0.0002																	18 2 <b>He</b> helium 4.0026 ± 0.0001				
3 <b>Li</b> lithium 6.94 ± 0.001	4 <b>Be</b> beryllium 9.0122 ± 0.0001															5 <b>B</b> boron 10.81 ± 0.02	6 <b>C</b> carbon 12.011 ± 0.002	7 <b>N</b> nitrogen 14.007 ± 0.001	8 <b>O</b> oxygen 15.999 ± 0.001	9 <b>F</b> fluorine 18.998 ± 0.001	10 <b>Ne</b> neon 20.180 ± 0.001
11 <b>Na</b> sodium 22.990 ± 0.001	12 <b>Mg</b> magnesium 24.305 ± 0.002															13 <b>Al</b> aluminium 26.982 ± 0.001	14 <b>Si</b> silicon 28.085 ± 0.001	15 <b>P</b> phosphorus 30.974 ± 0.001	16 <b>S</b> sulfur 32.06 ± 0.02	17 <b>Cl</b> chlorine 35.45 ± 0.01	18 <b>Ar</b> argon 39.95 ± 0.16
19 <b>K</b> potassium 39.098 ± 0.001	20 <b>Ca</b> calcium 40.078 ± 0.004	21 <b>Sc</b> scandium 44.956 ± 0.001	22 <b>Ti</b> titanium 47.867 ± 0.001	23 <b>V</b> vanadium 50.942 ± 0.001	24 <b>Cr</b> chromium 51.996 ± 0.001	25 <b>Mn</b> manganese 54.938 ± 0.001	26 <b>Fe</b> iron 55.845 ± 0.002	27 <b>Co</b> cobalt 58.933 ± 0.001	28 <b>Ni</b> nickel 58.693 ± 0.001	29 <b>Cu</b> copper 63.546 ± 0.003	30 <b>Zn</b> zinc 65.38 ± 0.02	31 <b>Ga</b> gallium 69.723 ± 0.001	32 <b>Ge</b> germanium 72.630 ± 0.008	33 <b>As</b> arsenic 74.922 ± 0.001	34 <b>Se</b> selenium 78.971 ± 0.008	35 <b>Br</b> bromine 79.904 ± 0.003	36 <b>Kr</b> krypton 83.798 ± 0.002				
37 <b>Rb</b> rubidium 85.468 ± 0.001	38 <b>Sr</b> strontium 87.62 ± 0.01	39 <b>Y</b> yttrium 88.906 ± 0.001	40 <b>Zr</b> zirconium 91.224 ± 0.002	41 <b>Nb</b> niobium 92.906 ± 0.001	42 <b>Mo</b> molybdenum 95.95 ± 0.01	43 <b>Tc</b> technetium [97]	44 <b>Ru</b> ruthenium 101.07 ± 0.02	45 <b>Rh</b> rhodium 102.91 ± 0.01	46 <b>Pd</b> palladium 106.42 ± 0.01	47 <b>Ag</b> silver 107.87 ± 0.01	48 <b>Cd</b> cadmium 112.41 ± 0.01	49 <b>In</b> indium 114.82 ± 0.01	50 <b>Sn</b> tin 118.71 ± 0.01	51 <b>Sb</b> antimony 121.76 ± 0.01	52 <b>Te</b> tellurium 127.60 ± 0.03	53 <b>I</b> iodine 126.90 ± 0.01	54 <b>Xe</b> xenon 131.29 ± 0.01				
55 <b>Cs</b> caesium 132.91 ± 0.01	56 <b>Ba</b> barium 137.33 ± 0.01	57-71 lanthanoids	72 <b>Hf</b> hafnium 178.49 ± 0.01	73 <b>Ta</b> tantalum 180.95 ± 0.01	74 <b>W</b> tungsten 183.84 ± 0.01	75 <b>Re</b> rhenium 186.21 ± 0.01	76 <b>Os</b> osmium 190.23 ± 0.03	77 <b>Ir</b> iridium 192.22 ± 0.01	78 <b>Pt</b> platinum 195.08 ± 0.02	79 <b>Au</b> gold 196.97 ± 0.01	80 <b>Hg</b> mercury 200.59 ± 0.01	81 <b>Tl</b> thallium 204.38 ± 0.01	82 <b>Pb</b> lead 207.2 ± 1.1	83 <b>Bi</b> bismuth 208.98 ± 0.01	84 <b>Po</b> polonium [209]	85 <b>At</b> astatine [210]	86 <b>Rn</b> radon [222]				
87 <b>Fr</b> francium [223]	88 <b>Ra</b> radium [226]	89-103 actinoids	104 <b>Rf</b> rutherfordium [267]	105 <b>Db</b> dubnium [268]	106 <b>Sg</b> seaborgium [269]	107 <b>Bh</b> bohrium [270]	108 <b>Hs</b> hassium [269]	109 <b>Mt</b> meitnerium [277]	110 <b>Ds</b> darmstadtium [281]	111 <b>Rg</b> roentgenium [282]	112 <b>Cn</b> copernicium [285]	113 <b>Nh</b> nihonium [286]	114 <b>Fl</b> flerovium [290]	115 <b>Mc</b> moscovium [290]	116 <b>Lv</b> livermorium [293]	117 <b>Ts</b> tennessine [294]	118 <b>Og</b> oganeson [294]				

Key:  
atomic number  
**Symbol**  
name  
abridged standard  
atomic weight

**H** – nonmetal  
**Mg** – metal, brittle soft  
**Mo** – metal, brittle hard  
**Cu** – metal, ductile malleable soft  
**Ti** – metal, ductile malleable hard  
**Tc** – synthetic/very rare/unstable

– light metal  
– heavy metal  
– low-melting metal  
– refractory metal  
– noble metal  
– rare-earth metal  
– metalloid



57 <b>La</b> lanthanum 138.91 ± 0.01	58 <b>Ce</b> cerium 140.12 ± 0.01	59 <b>Pr</b> praseodymium 140.91 ± 0.01	60 <b>Nd</b> neodymium 144.24 ± 0.01	61 <b>Pm</b> promethium [145]	62 <b>Sm</b> samarium 150.36 ± 0.02	63 <b>Eu</b> europium 151.96 ± 0.01	64 <b>Gd</b> gadolinium 157.25 ± 0.03	65 <b>Tb</b> terbium 158.93 ± 0.01	66 <b>Dy</b> dysprosium 162.50 ± 0.01	67 <b>Ho</b> holmium 164.93 ± 0.01	68 <b>Er</b> erbium 167.26 ± 0.01	69 <b>Tm</b> thulium 168.93 ± 0.01	70 <b>Yb</b> ytterbium 173.05 ± 0.02	71 <b>Lu</b> lutetium 174.97 ± 0.01
89 <b>Ac</b> actinium [227]	90 <b>Th</b> thorium 232.04 ± 0.01	91 <b>Pa</b> protactinium 231.04 ± 0.01	92 <b>U</b> uranium 238.03 ± 0.01	93 <b>Np</b> neptunium [237]	94 <b>Pu</b> plutonium [244]	95 <b>Am</b> americium [243]	96 <b>Cm</b> curium [247]	97 <b>Bk</b> berkelium [247]	98 <b>Cf</b> californium [251]	99 <b>Es</b> einsteinium [252]	100 <b>Fm</b> fermium [257]	101 <b>Md</b> mendelevium [258]	102 <b>No</b> nobelium [259]	103 <b>Lr</b> lawrencium [262]

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