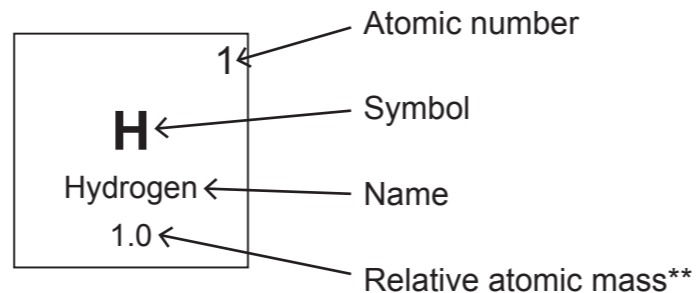


## Groups (IUPAC)\*

1																	18				
<b>H</b> Hydrogen 1.0																	<b>He</b> Helium 4.0				
<b>Li</b> Lithium 6.9	<b>Be</b> Beryllium 9.0															<b>B</b> Boron 10.8	<b>C</b> Carbon 12.0	<b>N</b> Nitrogen 14.0	<b>O</b> Oxygen 16.0	<b>F</b> Fluorine 19.0	<b>Ne</b> Neon 20.2
<b>Na</b> Sodium 23.0	<b>Mg</b> Magnesium 24.3															<b>Al</b> Aluminium 27.0	<b>Si</b> Silicon 28.1	<b>P</b> Phosphorus 31.0	<b>S</b> Sulfur 32.1	<b>Cl</b> Chlorine 35.5	<b>Ar</b> Argon 39.9
<b>K</b> Potassium 39.1	<b>Ca</b> Calcium 40.1	<b>Sc</b> Scandium 45.0	<b>Ti</b> Titanium 47.9	<b>V</b> Vanadium 50.9	<b>Cr</b> Chromium 52.0	<b>Mn</b> Manganese 54.9	<b>Fe</b> Iron 55.8	<b>Co</b> Cobalt 58.9	<b>Ni</b> Nickel 58.7	<b>Cu</b> Copper 63.5	<b>Zn</b> Zinc 65.4	<b>Ga</b> Gallium 69.7	<b>Ge</b> Germanium 72.6	<b>As</b> Arsenic 74.9	<b>Se</b> Selenium 79.0	<b>Br</b> Bromine 79.9	<b>Kr</b> Krypton 83.8				
<b>Rb</b> Rubidium 85.5	<b>Sr</b> Strontium 87.6	<b>Y</b> Yttrium 88.9	<b>Zr</b> Zirconium 91.2	<b>Nb</b> Niobium 92.9	<b>Mo</b> Molybdenum 95.9	<b>Tc</b> Technetium (98)	<b>Ru</b> Ruthenium 101.1	<b>Rh</b> Rhodium 102.9	<b>Pd</b> Palladium 106.4	<b>Ag</b> Silver 107.9	<b>Cd</b> Cadmium 112.4	<b>In</b> Indium 114.8	<b>Sn</b> Tin 118.7	<b>Sb</b> Antimony 121.8	<b>Te</b> Tellurium 127.6	<b>I</b> Iodine 126.9	<b>Xe</b> Xenon 131.3				
<b>Cs</b> Caesium 132.9	<b>Ba</b> Barium 137.3	Lanthanoids	<b>Hf</b> Hafnium 178.5	<b>Ta</b> Tantalum 180.9	<b>W</b> Tungsten 183.9	<b>Re</b> Rhenium 186.2	<b>Os</b> Osmium 190.2	<b>Ir</b> Iridium 192.2	<b>Pt</b> Platinum 195.1	<b>Au</b> Gold 197.0	<b>Hg</b> Mercury 200.6	<b>Tl</b> Thallium 204.4	<b>Pb</b> Lead 207.2	<b>Bi</b> Bismuth 209.0	<b>Po</b> Polonium (209)	<b>At</b> Astatine (210)	<b>Rn</b> Radon (222)				
<b>Fr</b> Francium (223)	<b>Ra</b> Radium (226)	Actinoids	<b>Rf</b> Rutherfordium (261)	<b>Db</b> Dubnium (262)	<b>Sg</b> Seaborgium (263)	<b>Bh</b> Bohrium (264)	<b>Hs</b> Hassium (269)	<b>Mt</b> Meitnerium (268)	<b>Ds</b> Darmstadtium (271)	<b>Rg</b> Roetgenium (272)	<b>Cn</b> Copernicium (285)	<b>Uut</b> Ununtrium (284)	<b>Fl</b> Flerovium (289)	<b>Uup</b> Ununpentium (288)	<b>Lv</b> Livermorium (293)	<b>Uus</b> Ununseptium (294)	<b>Uuo</b> Ununoctium (294)				
			<b>La</b> Lanthanum 138.9	<b>Ce</b> Cerium 140.1	<b>Pr</b> Praseodymium 140.9	<b>Nd</b> Neodymium 144.2	<b>Pm</b> Promethium (145)	<b>Sm</b> Samarium 150.4	<b>Eu</b> Europium 152.0	<b>Gd</b> Gadolinium 157.3	<b>Tb</b> Terbium 158.9	<b>Dy</b> Dysprosium 162.5	<b>Ho</b> Holmium 164.9	<b>Er</b> Erbium 167.3	<b>Tm</b> Thulium 168.9	<b>Yb</b> Ytterbium 173.0	<b>Lu</b> Lutetium 175.0				
			<b>Ac</b> Actinium (227)	<b>Th</b> Thorium 232.0	<b>Pa</b> Protactinium 231.0	<b>U</b> Uranium 238.0	<b>Np</b> Neptunium (237)	<b>Pu</b> Plutonium (244)	<b>Am</b> Americium (243)	<b>Cm</b> Curium (247)	<b>Bk</b> Berkelium (247)	<b>Cf</b> Californium (251)	<b>Es</b> Einsteinium (252)	<b>Fm</b> Fermium (257)	<b>Md</b> Mendelevium (258)	<b>No</b> Nobelium (259)	<b>Lr</b> Lawrencium (260)				



\* Groups are numbered according to IUPAC convention 1-18.

\*\* Values in brackets are for the isotope with the longest half-life.