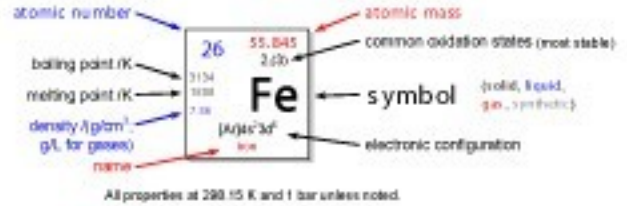
Periodic Table of the Elements



All properties at 298.15 K and 1 bar unless noted.

1																	18
1 1.0080 ±¹ H 20.28 17.01 0.08900 1s¹ hydrogen	2											13	14	15	16	17	2 4.002602 0 He 4.216 (29.29 bar) 0.1787 1s² helium
3 6.97 1 Li 1615 453.69 0.53 [He]2s¹ lithium	4 9.012182 2 Be 2745 1560 1.848 [He]2s² beryllium											5 10.81 3 B 4275 2352 2.34 [He]2s²2p¹ boron	6 12.011 2,(4) C 5100 (4200 (sub.)) 2.62 [He]2s²2p² carbon	7 14.0069 (-3),2,3,4,5 N 77.4 63.29 1.2506 [He]2s²2p³ nitrogen	8 15.9994 -2 O 90.188 54.8 1.429 [He]2s²2p⁴ oxygen	9 18.998403 -1 F 85.01 53.53 1.696 [He]2s²2p⁵ fluorine	10 20.1797 0 Ne 27.102 24.49 0.8999 [He]2s²2p⁶ neon
11 22.989769 1 Na 1156.1 370.96 0.971 [Ne]3s¹ sodium	12 24.3050 2 Mg 1363 922 1.738 [Ne]3s² magnesium											13 26.9815339 3 Al 2792 933.52 2.702 [Ne]3s²3p¹ aluminium	14 28.085 2,(4),-4 Si 3538 1680 2.35 [Ne]3s²3p² silicon	15 30.973762 ±3,(5) P 553 317.3 1.82 [Ne]3s²3p³ phosphorus	16 32.07 -2,4,(6) S 717.8 388.36 2.07 [Ne]3s²3p⁴ sulfur	17 35.45 (+1),3,5,7 Cl 239.6 172.17 3.214 [Ne]3s²3p⁵ chlorine	18 39.948 0 Ar 87.5 84 1.7824 [Ne]3s²3p⁶ argon
19 39.0983 1 K 1033.1 336.4 0.862 [Ar]4s¹ potassium	20 40.078 2 Ca 1757 1112 1.55 [Ar]4s² calcium	21 44.955912 3 Sc 3103 1814 2.99 [Ar]4s²3d¹ scandium	22 47.867 2,3,(4) Ti 3560 1941±10 4.50 [Ar]4s²3d² titanium	23 50.9415 2,3,4,(5) V 3680 2163±10 5.08 [Ar]4s²3d³ vanadium	24 51.9961 2,(3),6 Cr 2945 2130 7.19 [Ar]4s¹3d⁵ chromium	25 54.938045 (2),3,4,6,7 Mn 2334 1517 7.43 [Ar]4s²3d⁵ manganese	26 55.845 2,(3) Fe 3134 1808 7.86 [Ar]4s²3d⁶ iron	27 58.933195 (2),3 Co 3208 1768 8.90 [Ar]4s²3d⁷ cobalt	28 58.6934 (2),3 Ni 3186 1726 8.08 [Ar]4s²3d⁸ nickel	29 63.546 1,(2) Cu 2843 1358 8.96 [Ar]4s¹3d¹⁰ copper	30 65.38 2 Zn 1180 692.73 7.14 [Ar]4s²3d¹⁰ zinc	31 69.723 3 Ga 2477 302.93 5.907 [Ar]4s²3d¹⁰4p¹ gallium	32 72.63 2,(4) Ge 3100 1210.6 5.323 [Ar]4s²3d¹⁰4p² germanium	33 74.92160 (±3),5 As 889 (sub.) 1090 (triple) 5.72 [Ar]4s²3d¹⁰4p³ arsenic	34 78.96 -2,(4),6 Se 958.1 490 4.79 [Ar]4s²3d¹⁰4p⁴ selenium	35 79.904 (±1),5 Br 331.93 265.8 3.119 [Ar]4s²3d¹⁰4p⁵ bromine	36 83.798 0 Kr 120.9 115.8 3.708 [Ar]4s²3d¹⁰4p⁶ krypton
37 85.4678 1 Rb 959 312.84 1.53 [Kr]5s¹ rubidium	38 87.62 2 Sr 1657 1062 2.60 [Kr]5s² strontium	39 88.90585 3 Y 3611 1795±60 4.47 [Kr]5s²4d¹ yttrium	40 91.224 4 Zr 4650 2125±2 6.49 [Kr]5s²4d² zirconium	41 92.906 3,(5) Nb 5015 2477±10 8.57 [Kr]5s¹4d⁴ niobium	42 95.96 2,3,4,5,(6) Mo 4885 2890 10.28 [Kr]5s¹4d⁵ molybdenum	43 [97.9072] 4,6,(7) Tc 5150 2445 11.5 [Kr]5s²4d⁵ technetium	44 101.07 2,(3),(4),6,8 Ru 4423 2607 12.30 [Kr]5s¹4d⁷ ruthenium	45 102.90550 2,(3),4 Rh 3968 2236±3 12.41 [Kr]5s¹4d⁸ rhodium	46 106.42 (2),4 Pd 3236 1825 12.02 [Kr]4d¹⁰ palladium	47 107.8682 1 Ag 2435 1235.08 10.50 [Kr]5s¹4d¹⁰ silver	48 112.411 2 Cd 1038 594.1 8.65 [Kr]5s²4d¹⁰ cadmium	49 114.818 3 In 2353 429.76 7.31 [Kr]5s²4d¹⁰5p¹ indium	50 118.710 2,(4) Sn 2875 505.12 7.30 [Kr]5s²4d¹⁰5p² tin	51 121.760 (±3),5 Sb 1860 903.89 6.684 [Kr]5s²4d¹⁰5p³ antimony	52 127.60 -2,(4),6 Te 1263.1 722.7 6.24 [Kr]5s²4d¹⁰5p⁴ tellurium	53 126.90447 (±1),5,7 I 457.5 386.85 4.93 [Kr]5s²4d¹⁰5p⁵ iodine	54 131.293 0 Xe 166.1 161.3 5.89 [Kr]5s²4d¹⁰5p⁶ xenon
55 132.9054519 1 Cs 942.8 301.55 1.873 [Xe]6s¹ caesium	56 137.327 2 Ba ★ 2170 998 3.51 [Xe]6s² barium	71 174.9668 3 Lu 3675 1936 9.85 [Xe]6s²4f¹⁴5d¹ lutetium	72 178.49 4 Hf 4875 2506 13.2 [Xe]6s²4f¹⁴5d² hafnium	73 180.94788 5 Ta 5731±100 2869 16.6 [Xe]6s²4f¹⁴5d³ tantalum	74 183.84 2,3,4,5,(6) W 5933 3683±20 19.3 [Xe]6s²4f¹⁴5d⁴ tungsten	75 186.207 -1,2,4,6,(7) Re 5900 (est.) 3459 21.0 [Xe]6s²4f¹⁴5d⁵ rhenium	76 190.23 2,3,(4),6,8 Os 5300 3327 22.4 [Xe]6s²4f¹⁴5d⁶ osmium	77 192.217 2,3,(4),6 Ir 4403 2683 22.42 [Xe]6s²4f¹⁴5d⁷ iridium	78 195.084 2,(4) Pt 4100 2045 21.45 [Xe]6s¹4f¹⁴5d⁹ platinum	79 196.966569 1,(3) Au 3081 1337.58 19.32 [Xe]6s¹4f¹⁴5d¹⁰ gold	80 200.59 1,(2) Hg 629.73 234.28 13.546 [Xe]6s²4f¹⁴5d¹⁰ mercury	81 204.384 (1),3 Tl 1730±10 576.7 11.85 [Xe]6s²4f¹⁴5d¹⁰6p¹ thallium	82 207.2 (2),4 Pb 2013 600.650 11.34 [Xe]6s²4f¹⁴5d¹⁰6p² lead	83 208.98040 (3),5 Bi 1833±5 544.5 9.68 [Xe]6s²4f¹⁴5d¹⁰6p³ bismuth	84 [208.9824] 2,(4) Po 1235 527 9.4 [Xe]6s²4f¹⁴5d¹⁰6p⁴ polonium	85 [209.9871] (±1),3,5,7 At 610 575 [Xe]6s²4f¹⁴5d¹⁰6p⁵ astatine	86 [222.0176] 0 Rn 211 202 9.73 [Xe]6s²4f¹⁴5d¹⁰6p⁶ radon
87 [223.0197] 1 Fr 950 300 [Rn]7s¹ francium	88 [226.0254] 2 Ra ★★ 1413 973 5.0 [Rn]7s² radium	103 [261.1088] 3 Lr [Rn]7s²5f¹⁴6d¹ lawrencium	104 [265.1167] 4 Rf [Rn]7s²5f¹⁴6d² rutherfordium	105 [268.1256] — Db [Rn]7s²5f¹⁴6d³ dubnium	106 [271.1335] — Sg [Rn]7s²5f¹⁴6d⁴ seaborgium	107 [270] — Bh [Rn]7s²5f¹⁴6d⁵ bohrium	108 [277.1508] — Hs [Rn]7s²5f¹⁴6d⁶ hassium	109 [276.1511] — Mt [Rn]7s²5f¹⁴6d⁷ meitnerium	110 [281] — Ds [Rn]7s¹5f¹⁴6d⁹ darmstadtium	111 [280.1646] — Rg [Rn]7s²5f¹⁴6d⁹ roentgenium	112 [285.1741] — Cn [Rn]7s²5f¹⁴6d¹⁰ copernicium	113 [285] provisional Nh [Rn]7s²5f¹⁴6d¹⁰7p¹ nihonium	114 [289.1901] — Fl [Rn]7s²5f¹⁴6d¹⁰7p² flerovium	115 [288] provisional Mc [Rn]7s²5f¹⁴6d¹⁰7p³ moscovium	116 [293] — Lv [Rn]7s²5f¹⁴6d¹⁰7p⁴ livermorium	117 [294] provisional Ts [Rn]7s²5f¹⁴6d¹⁰7p⁵ tennessine	118 [294] provisional Og [Rn]7s²5f¹⁴6d¹⁰7p⁶ oganesson

★	57 138.90547 3 La 3737 1191 6.7 [Xe]6s²5d¹ lanthanum	58 140.116 (3),4 Ce 3716 1071±3 6.78 [Xe]6s²4f¹5d¹ cerium	59 140.90765 (3),(4) Pr 3793 1204 6.77 [Xe]6s²4f³ praseodymium	60 144.242 3 Nd 3347 1294 7.00 [Xe]6s²4f⁴ neodymium	61 [144.9127] 3 Pm 3000 (est.) 1315 6.475 [Xe]6s²4f⁵ promethium	62 150.36 2,(3) Sm 2067 1347 7.54 [Xe]6s²4f⁶ samarium	63 151.964 2,(3) Eu 1800 1095 5.259 [Xe]6s²4f⁷ europium	64 157.25 3 Gd 3546 1585 7.895 [Xe]6s²4f⁷5d¹ gadolinium	65 158.92535 (3),4 Tb 3503 1629 8.27 [Xe]6s²4f⁹ terbium	66 162.500 3 Dy 2840 1685 8.536 [Xe]6s²4f¹⁰ dysprosium	67 164.93032 3 Ho 2873 1747 8.80 [Xe]6s²4f¹¹ holmium	68 167.259 3 Er 3141 1802 9.05 [Xe]6s²4f¹² erbium	69 168.93421 2,(3) Tm 2223 1818 9.33 [Xe]6s²4f¹³ thulium	70 173.054 2,(3) Yb 1469 1092 6.98 [Xe]6s²4f¹⁴ ytterbium
★★	89 [227.0278] 3 Ac 3500±300 1323 10.07 [Rn]7s²6d¹ actinium	90 232.0381 4 Th 4273 2023 11.70 [Rn]7s²6d² thorium	91 [231.0359] 4,(5) Pa 4300±300 1573 15.48 [Rn]7s²5f²6d¹ protactinium	92 238.02891 3,4,5,(6) U 4091 1408 18.90 [Rn]7s²5f³6d¹ uranium	93 [237.0482] 3,4,(5),6 Np 4175 913 20.45 [Rn]7s²5f⁴6d¹ neptunium	94 [244.0642] 3,(4),5,6 Pu 3505 914 19.84 [Rn]7s²5f⁶ plutonium	95 [243.0614] (3),4,5,6 Am 2880 1267 13.8 [Rn]7s²5f⁷ americium	96 [247.0703] (3),4 Cm 1613 13.5 [Rn]7s²5f⁷6d¹ curium	97 [247.0703] (3),4 Bk [Rn]7s²5f⁹ berkelium	98 [251.0796] (3),4 Cf [Rn]7s²5f¹⁰ californium	99 [252.0830] (2),3 Es [Rn]7s²5f¹¹ einsteinium	100 [257.0951] 3 Fm [Rn]7s²5f¹² fermium	101 [258.0984] 2,3 Md [Rn]7s²5f¹³ mendelevium	102 [259.1010] 2,3 No [Rn]7s²5f¹⁴ nobelium

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