## Periodic Table of the Elements

18 (2) 2p (2) (5)	3p	4 <i>p</i>	5 <i>p</i>	d9	7 <i>p</i>
Helium 4.002602(2) Neon Neon Neon	$\mathop{Argon}\limits_{ ext{Argon}}$	$\sum_{\mathbf{K} \text{Typton}}^{3.00} k_{\mathbf{K} \text{ypton}}^{4p}$	2.60 Xenon Xenon 131.293(6)	$\mathbf{R}^{2.2}_{\mathrm{Radon}}$	$\bigcup_{(294)}^{71}$
1 5	3p 18	36	5p 54		~
9 3.98 2p Fluorine Fluorine 18.998403163(6)	$ \begin{array}{c c}  & 3.16 \\ \hline  & C \\ \hline  & Chlorine \\ 35.446-35.457 \end{array} $		3 2.66 5 T Iodine 126.90447(3)	$\overset{2.2}{\operatorname{At}}$ Astatine (210)	$\bigcup_{(294)}^{77}$
2p 9		19 35 B B 79.5	5p <b>53</b>	6p 85	_
3.44 2 Oxygen 15.99903-	16 2.58 3p Sulphur 32.059–32.076	Selenium B Selenium B 78.971(8) 79.9	$\overset{2.1}{\text{Te}}$	$\mathbf{P_0}^{2.0}$ Colonium (209)	$\sum_{\text{(293)}}^{7_f}$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3p 16	p 34 Se Se 78	5p 52 r	6p <b>84</b> Po	
3.04 2)  Nitrogen 14.00643- 14.00728	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$egin{array}{c cccc} 3 & \underline{2.18} & 4p & 34 \\ \mathbf{AS} & \mathbf{S} & & & & & & & & & \\ & \mathbf{Arsenic} & & & & & & & & \\ 74.921595(6) & & & & & & & & \\ \end{array}$	$\mathop{\mathbf{Sb}}_{\text{Antimony}}^{2.05}$	3 2.02 67 <b>Bi</b> Bismuth 208.98040(1)	$\mathop{\rm Uup}\limits_{^{(289)}}^{7p}$
~	3p 15 2 Phosi 86 30.973′	I 71.76	5p 51 5 Anti	6p 83 5 Biss 208.9	$\bigcup_{(2)}^{7p}$
$\bigcap_{\substack{2.55 \\ \text{Carbon}}} 2p^{1/2}$ $\bigcap_{\substack{12.0096-12.0016}}$	9	Germanium A2.03.08) 33.08	$\mathbf{\hat{S}_{n}^{\frac{1.96}{5}}}$	l 👝 😑	. 8
	Silicon 28.084-28		50 Li T.8.7	82 1.87 PL Lead 207.2(1	$\mathbf{F}_{1}$ $\mathbf{F}_{114}$ $\mathbf{F}_{1}$
2p 6	1 3p 14 ium 85(7) 28	1.81 4p 32 2.32 3.23(1) Ge	8 5p 50 m m 1	d9	1 <b>t</b>
2.04 2. Boron 10.806-10.821	$ \underset{26.9815385(7)}{13} \underbrace{\mathbf{AI}}_{26.9815385(7)} $	رم والم	9 1.78 <b>In</b> Indium 114.818(1)	1 1.62 Thallium 204.382–204.385	$\bigcup_{(286)}^{7}$
. ca	H "		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	12.00 5d 8 sreury 1.592(3)	7
		$\sum_{\mathrm{Zinc}}^{1.65}$	Cadmium (112.414(4))	l 🛏 48	$\overset{6c}{\operatorname{Copernicium}}^{20}$
		$\sum_{\mathbf{v} \in \mathcal{V}} \frac{28}{\mathbf{N}} \frac{3d}{\mathbf{N}} \frac{28}{\mathbf{N}} \frac{1.91}{\mathbf{N}} \frac{3d}{\mathbf{C}} \frac{29}{\mathbf{L}} \frac{1.90}{24} \frac{3d^*}{\mathbf{N}} \frac{30}{\mathbf{N}}$	$\begin{array}{ c c c c c c c c }\hline & & & & & & & & & & & & & & & & & & &$	08	
		$\mathbf{C_{u}^{1.90}}^{2}$	$\mathbf{\overset{1.93}{A}\overset{4c}{g}}$	$\mathbf{Au}^{79 \ \ 2.54} \ 5d^*$	$\mathop{\mathrm{Re}}_{\text{montgenium}}^{6d}$
		3d 29	d* 47	*	6d 1111 - m Roe
		$\sum_{\substack{\text{Nickel}\\88.6934(4)}}^{1.91}$	$\stackrel{\text{2.20}}{Pd}^{4d*}$	2.28 5, Pt Platinum 195.084(9)	$\mathop{\mathbf{DS}}_{\mathrm{Darmstadtium}}^{\mathrm{6}d}$
		d 28	* 46 Pai	5d 78	p
		$ \begin{array}{ccc} \mathbf{C} & \frac{1.88}{1.88} & 30 \\ \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} \\ \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} \\ \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} \\ \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} \\ \mathbf{C} & \mathbf{C} & \mathbf{C} & \mathbf{C} &$	$egin{array}{c c} \mathbf{R} & \underline{46}^* & \underline{46} \\ \mathbf{Rh} & \mathbf{J} \\ \mathbf{Rhodium} & \mathbf{Pa} \\ \mathbf{Rhodium} & \mathbf{Pa} \\ \mathbf{102.90550(2)} & 11 \end{array}$	$\overline{\mathbf{Lr}}$ Iridium 192.217(3)	$\overset{60}{\mathrm{Meitnerium}}^{6}$
shell; atomic		3d 27 C	Rhc 102.9	5d 77 5d Iric	$\begin{bmatrix} 5d & 109 \\ & &$
s = sub		୍ଦ		୍ଡିଞ ଦୁଏ	
ivity; ss w = sts		26 1.83 Fe Iron 155.845(	$\overset{44}{\mathrm{Ru}}$	5d 76 2.2 Osmiu Osmiu	$\mathop{Hassium}_{\text{(269)}}$
ronegat		15 3d <b>D</b> nese nese 44(3)	$\mathbf{T}_{\text{chnetium}}^{1.9}$	4	6 <i>d</i>
= electi ment na		$\overline{\mathbf{M}}_{\mathbf{n}}^{25}$ 3c $\overline{\mathbf{N}}_{\mathbf{n}}^{25}$ Manganese 54.938044(3)	$\frac{\mathbf{L3}}{\mathbf{LC}}$ Technetium (98)	$\overset{5}{\mathbf{Re}}_{\text{lenium}}^{1}$	$\mathop{\mathbf{Bhrium}}_{\text{(270)}}$
Z= atomic number; eneg = electronegativity; ss = subshell; Sy = Symbol, Name = element name, saw = standard atomic weight		*#	4 * 44 * 10 mum	W Rhenium Rhenium 3.84(1)	6d 107
numbe		$\overset{1}{\mathbf{C}}\overset{1.66}{\mathbf{r}}\overset{3d}{\mathbf{r}}$	$\mathbf{Molybdenum}^{42} \underbrace{2.16}_{95.95(1)} 4d^*$		$\mathop{\mathbf{Sg}}_{\text{Seaborgium}}^{6}$
atomic Symbo		3d <b>24</b>	4d* 42	5d 74	. pg
Z = ats Sy = S weight		$\frac{1.63}{V}$ Vanadium 50.9415(1)	$\stackrel{1}{N}\stackrel{1.6}{N}$	Tantalum 180.94788(2)	$\mathop{Db}_{\text{Dubnium}}^{\text{D5}}$
8	]	3d 23	44 41	5 d 7	10.
Sy Name saw		$\prod_{1.54}^{1.54}$ Titanium 47.867(1)	Zirconium 91.224(2)	HHalfnium 178.49(2)	$ ho_{ m erfordit}$
Z		d 22	d 40	72 HH HI	104
		$\overset{1}{\text{Sc}}\overset{1.36}{\text{Sc}}\overset{3}{\text{Sc}}$	1.22 4 Yttrium 88.90584(2)	57-71  * Lanthanides	<b>** ** * * * * * * * *</b>
		21 Scar 844.95	$ \sum_{\substack{\text{Nobium} \\ \text{St.90654(2)}} } \frac{1.22}{\text{Vt}}  4d  \frac{40}{1.33}  4d  \frac{11.6}{\text{Nobium}}  4d^*  \frac{42}{1.65}  \frac{2.16}{4d^*}  4d^*  \frac{43}{1.9}  \frac{1.9}{4d}  \frac{44}{2.2}  \frac{2.2}{4}  \frac{44}{1.65}  \frac{2.2}{4}  \frac{4}{1.65}  \frac{2.2}{4}  $		· .
1.57 28 Beyllium 9.0121831(5)	${\displaystyle \mathop{\mathrm{Magnesium}}_{\text{Magnesium}}}^{2}$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\overset{0.95}{\mathbf{Sr}}$ 5s strontium 87.62(1)	$\overset{0.89}{\mathbf{Ba}}\overset{6s}{\mathbf{a}}$	$\overset{\text{t. }0.9}{\text{Radium}}$
4	$\mathop{\mathrm{Magnesium}}_{24.304-24.307}$	20 <u>1</u> Calc	± ∞	26	$egin{array}{c c} 7s & 88 & \underline{0} \ & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & &$
8 8	am M M M M M M M M M M M M M M M M M M M	82 4s <b>7</b> inm inm 3(1)	32 55 38 (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	0.79 6s S esium 0545196(6)	<b>.</b> E
Hydrogen 1.00784- 1.00814 2.08 2 1.1 Lithium 1.1 Lithium 1.1 Lithium 1.1 Lithium 1.1 Lithium	$\overset{11}{\overset{0.93}{\overset{0.93}{}{\sim}}} \overset{3s}{\overset{5odium}{\overset{1}{\sim}}}$	$\overset{19}{\overset{0.82}{K}}$	$\mathop{Rubidium}\limits_{85.4678(3)}$	$ \begin{array}{c cccc} 55 & \underline{0.79} & 6s \\ \mathbf{CS} & \\ \mathbf{Cesium} \\ 132.90545196(6) \end{array} $	$\Pr_{\text{Francium}} \frac{0.7}{\text{Francium}}$
3	17 04	1-1	4.0	27 -	~

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\stackrel{1}{\mathrm{Md}} \stackrel{5f}{\mathrm{Mo}} \stackrel{1.2}{\mathrm{No}} \stackrel{5f}{\mathrm{Mo}} \stackrel{1.2}{\mathrm{Nobelium}} \stackrel{1.3}{\mathrm{Nobelium}} \stackrel{6}{\mathrm{Nobelium}} \stackrel{6.56}{\mathrm{Nobelium}} $
4f 68 1.24 4f 69 Erbium 2) 167.259(3) 16	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
67 1.23 4f HOmium 164.93033(2)	$\frac{99}{\mathbf{ES}}  \begin{array}{c} 1.3 & 5f \\ \mathbf{ES} \end{array}$
$\mathop{Dy}\limits_{\text{Dysprosium}}^{\text{f}} \frac{4f}{162.500(1)}$	$ \begin{array}{c cccc} 5f & 98 & 1.3 & 5f \\ \hline \mathbf{Cf} & \\ \text{Californium} \\ (251) & \\ \end{array} $
$\prod_{\substack{\text{Terbium} \\ 158.92535(2)}}^{46}$	3 <b>X X X X X X X X X X</b>
44 G4 1.2 4f* 65 G4 Gadolinium TE 157.25(3) 158.	$\stackrel{3}{\text{m}}$ 5f 96 $\stackrel{1.28}{\text{c}}$ 5f* 97 $\stackrel{1.28}{\text{m}}$ $\stackrel{1.28}{\text{c}}$ 10 $\stackrel{1.28}{\text{c}}$
$\mathbf{E}_{151.964(1)}^{63}$	$A_{\mathrm{mericium}}^{f \mid 95 \pmod{1.13}}$
<b>Sm</b> Samarium 150.36(2)	Plutonium (244)
$\Pr_{\text{Promethium}} \frac{4f}{Pm}$	$\mathbf{q}^{1.36}$ $\mathbf{p}^{1.36}$ $\mathbf{p}^{1.36}$ Neptunium
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
[i ↑ . 호   j	$\mathbf{P}^{(a)}_{\mathbf{A}}$
	$\prod_{\substack{1.3\\232\\0377(4)}}^{1.3} 5f^*$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \underset{(227)}{89}  \underset{(227)}{\underline{1.1}}  6d^* $
*	* *

Standard atomic weights taken from the Commission on Isotopic Abundances and Atomic Weights (ciaaw.org/atomic-weights.htm). Adapted from Ivan Griffin's LAFX Periodic Table. © 2015 Paul Danese

An asterisk (\*) next to a subshell indicates an anomalous (Aufbau rule-breaking) ground state electron configuration.