

Electron Configuration, Orbital Notation, Electron Dot and Valence Electrons

Name Key



add electrons
in outermost
↓ main level

Element and atomic #	Electron Configuration	Orbital Notation	Electron Dot	# of valence electrons
Si 14	$1s^2 2s^2 2p^6 3s^2 3p^2$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & _ \\ 1s & 2s & 2p & 3s & 3p & & & \end{array}$	•Si•	4
Fe 26	$1s^2 2s^2 2p^6 3s^2 3p^6$ $3d^6 4s^2$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ 1s & 2s & 2p & 3s & 3p & & & & \\ \uparrow\downarrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow\downarrow & & & \\ & & 3d & 4s & & & & & \end{array}$	•Fe•	2
He 2	$1s^2$	$\begin{array}{c} \uparrow\downarrow \\ 1s \end{array}$	•He•	2
B 5	$1s^2 2s^2 2p^1$	$\begin{array}{cccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow & _ \\ 1s & 2s & 2p & _ \end{array}$	•B•	3
Ne 10	$1s^2 2s^2 2p^6$	$\begin{array}{cccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ 1s & 2s & 2p & & \end{array}$	•Ne•	8
P 15	$1s^2 2s^2 2p^6$ $3s^2 3p^3$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow \\ 1s & 2s & 2p & 3s & 3p & & & \end{array}$	•P•	5
Ca 20	$1s^2 2s^2 2p^6$ $3s^2 3p^6 4s^2$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ 1s & 2s & 2p & 3s & 3p & & & & \\ _ & _ & _ & \uparrow\downarrow & _ & _ & _ & _ & _ \\ & & 3d & 4s & 4p & & & & \end{array}$	•Ca•	2
Mn 25	$1s^2 2s^2 2p^6$ $3s^2 3p^6 4s^2 3d^5$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ 1s & 2s & 2p & 3s & 3p & & & & \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow\downarrow & _ & _ & _ \\ & & 3d & 4s & 4p & & & & \end{array}$	•Mn•	2
As 33	$1s^2 2s^2 2p^6$ $3s^2 3p^6 3d^{10}$ $4s^2 4p^3$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ 1s & 2s & 2p & 3s & 3p & & & & \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow \\ & & 3d & 4s & 4p & & & & \end{array}$	•As•	5
N 7	$1s^2 2s^2 2p^3$	$\begin{array}{cccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow \\ 1s & 2s & 2p & & \end{array}$	•N•	5
Cl 17	$1s^2 2s^2 2p^6$ $3s^2 3p^5$	$\begin{array}{ccccccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow \\ 1s & 2s & 2p & 3s & 3p & & & & \end{array}$	•Cl•	7
F 9	$1s^2 2s^2 2p^5$	$\begin{array}{cccc} \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow \\ 1s & 2s & 2p & \end{array}$	•F•	7
Be 4	$1s^2 2s^2$	$\begin{array}{ccc} \uparrow\downarrow & \uparrow\downarrow & _ \\ 1s & 2s & 2p \end{array}$	•Be•	2