

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1 H hydrogen 1s ¹																	2 He helium 1s ²	
3 Li lithium [He]2s ¹	4 Be beryllium [He]2s ²																	10 Ne neon [He]2s ² 2p ⁶
11 Na sodium [Ne]3s ¹	12 Mg magnesium [Ne]3s ²																	18 Ar argon [Ne]3s ² 3p ⁶
19 K potassium [Ar]4s ¹	20 Ca calcium [Ar]4s ²	21 Sc scandium [Ar]3d ¹ 4s ²	22 Ti titanium [Ar]3d ² 4s ²	23 V vanadium [Ar]3d ³ 4s ²	24 Cr chromium [Ar]3d ⁵ 4s ¹	25 Mn manganese [Ar]3d ⁵ 4s ²	26 Fe iron [Ar]3d ⁶ 4s ²	27 Co cobalt [Ar]3d ⁷ 4s ²	28 Ni nickel [Ar]3d ⁸ 4s ²	29 Cu copper [Ar]3d ¹⁰ 4s ¹	30 Zn zinc [Ar]3d ¹⁰ 4s ²	31 Ga gallium [Ar]3d ¹⁰ 4s ² 4p ¹	32 Ge germanium [Ar]3d ¹⁰ 4s ² 4p ²	33 As arsenic [Ar]3d ¹⁰ 4s ² 4p ³	34 Se selenium [Ar]3d ¹⁰ 4s ² 4p ⁴	35 Br bromine [Ar]3d ¹⁰ 4s ² 4p ⁵	36 Kr krypton [Ar]3d ¹⁰ 4s ² 4p ⁶	
37 Rb rubidium [Kr]5s ¹	38 Sr strontium [Kr]5s ²	39 Y yttrium [Kr]4d ¹ 5s ²	40 Zr zirconium [Kr]4d ² 5s ²	41 Nb niobium [Kr]4d ⁴ 5s ¹	42 Mo molybdenum [Kr]4d ⁵ 5s ¹	43 Tc technetium [Kr]4d ⁵ 5s ²	44 Ru ruthenium [Kr]4d ⁷ 5s ¹	45 Rh rhodium [Kr]4d ⁸ 5s ¹	46 Pd palladium [Kr]4d ¹⁰	47 Ag silver [Kr]4d ¹⁰ 5s ¹	48 Cd cadmium [Kr]4d ¹⁰ 5s ²	49 In indium [Kr]4d ¹⁰ 5s ² 5p ¹	50 Sn tin [Kr]4d ¹⁰ 5s ² 5p ²	51 Sb antimony [Kr]4d ¹⁰ 5s ² 5p ³	52 Te tellurium [Kr]4d ¹⁰ 5s ² 5p ⁴	53 I iodine [Kr]4d ¹⁰ 5s ² 5p ⁵	54 Xe xenon [Kr]4d ¹⁰ 5s ² 5p ⁶	
55 Cs caesium [Xe]6s ¹	56 Ba barium [Xe]6s ²	lanthanides	72 Hf hafnium [Xe]4f ¹⁴ 5d ² 6s ²	73 Ta tantalum [Xe]4f ¹⁴ 5d ³ 6s ²	74 W tungsten [Xe]4f ¹⁴ 5d ⁴ 6s ²	75 Re rhenium [Xe]4f ¹⁴ 5d ⁵ 6s ²	76 Os osmium [Xe]4f ¹⁴ 5d ⁶ 6s ²	77 Ir iridium [Xe]4f ¹⁴ 5d ⁷ 6s ²	78 Pt platinum [Xe]4f ¹⁴ 5d ⁹ 6s ¹	79 Au gold [Xe]4f ¹⁴ 5d ¹⁰ 6s ¹	80 Hg mercury [Xe]4f ¹⁴ 5d ¹⁰ 6s ²	81 Tl thallium [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹	82 Pb lead [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ²	83 Bi bismuth [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ³	84 Po polonium [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴	85 At astatine [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁵	86 Rn radon [Xe]4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁶	
87 Fr francium [Rn]7s ¹	88 Ra radium [Rn]7s ²	actinides	104 Rf rutherfordium [Rn]5f ¹⁴ 6d ² 7s ²	105 Db dubnium [Rn]5f ¹⁴ 6d ³ 7s ²	106 Sg seaborgium [Rn]5f ¹⁴ 6d ⁴ 7s ²	107 Bh bohrium [Rn]5f ¹⁴ 6d ⁵ 7s ²	108 Hs hassium [Rn]5f ¹⁴ 6d ⁶ 7s ²	109 Mt meitnerium [Rn]5f ¹⁴ 6d ⁷ 7s ²	110 Ds darmstadtium [Rn]5f ¹⁴ 6d ⁹ 7s ¹	111 Rg roentgenium [Rn]5f ¹⁴ 6d ¹⁰ 7s ¹	112 Cn copernicium [Rn]5f ¹⁴ 6d ¹⁰ 7s ²	113 Nh nihonium [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ¹	114 Fl flerovium [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ²	115 Mc moscovium [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ³	116 Lv livermorium [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁴	117 Ts tennessine [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁵	118 Og oganeson [Rn]5f ¹⁴ 6d ¹⁰ 7s ² 7p ⁶	



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lanthanides	57 La lanthanum [Xe]5d ¹ 6s ²	58 Ce cerium [Xe]4f ¹ 5d ¹ 6s ²	59 Pr praseodymium [Xe]4f ³ 6s ²	60 Nd neodymium [Xe]4f ⁴ 6s ²	61 Pm promethium [Xe]4f ⁵ 6s ²	62 Sm samarium [Xe]4f ⁶ 6s ²	63 Eu europium [Xe]4f ⁷ 6s ²	64 Gd gadolinium [Xe]4f ⁷ 5d ¹ 6s ²	65 Tb terbium [Xe]4f ⁹ 6s ²	66 Dy dysprosium [Xe]4f ⁹ 6s ²	67 Ho holmium [Xe]4f ¹¹ 6s ²	68 Er erbium [Xe]4f ¹² 6s ²	69 Tm thulium [Xe]4f ¹³ 6s ²	70 Yb ytterbium [Xe]4f ¹⁴ 6s ²	71 Lu lutetium [Xe]4f ¹⁴ 5d ¹ 6s ²
actinides	89 Ac actinium [Rn]6d ¹ 7s ²	90 Th thorium [Rn]6d ² 7s ²	91 Pa protactinium [Rn]5f ² 6d ¹ 7s ²	92 U uranium [Rn]5f ³ 6d ¹ 7s ²	93 Np neptunium [Rn]5f ⁴ 6d ¹ 7s ²	94 Pu plutonium [Rn]5f ⁶ 7s ²	95 Am americium [Rn]5f ⁷ 7s ²	96 Cm curium [Rn]5f ⁷ 6d ¹ 7s ²	97 Bk berkelium [Rn]5f ⁹ 7s ²	98 Cf californium [Rn]5f ¹⁰ 7s ²	99 Es einsteinium [Rn]5f ¹¹ 7s ²	100 Fm fermium [Rn]5f ¹² 7s ²	101 Md mendelevium [Rn]5f ¹³ 7s ²	102 No nobelium [Rn]5f ¹⁴ 7s ²	103 Lr lawrencium [Rn]5f ¹⁴ 7s ² 7p ¹