

UKŁAD OKRESOWY PIERWIASTKÓW

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		1	2	3													4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
		I	II	III													IV	V	VI	VII	VIII			I	II	III	IV	V	VI	VII	VIII					
		A	A	B													B	B	B	B	B			B	B	A	A	A	A	A	A					
		s		f												d										p										
1	K	1 H 1s ¹																								2 He 1s ²										
2	L	3 Li 2s ¹	4 Be 2s ²																								5 B 2s ² 2p ¹	6 C 2s ² 2p ²	7 N 2s ² 2p ³	8 O 2s ² 2p ⁴	9 F 2s ² 2p ⁵	10 Ne 2s ² 2p ⁶				
3	M	11 Na 3s ¹	12 Mg 3s ²																								13 Al 3s ² 3p ¹	14 Si 3s ² 3p ²	15 P 3s ² 3p ³	16 S 3s ² 3p ⁴	17 Cl 3s ² 3p ⁵	18 Ar 3s ² 3p ⁶				
4	N	19 K 4s ¹	20 Ca 4s ²	21 Sc 4s ² 3d ¹																		22 Ti 4s ² 3d ²	23 V 4s ² 3d ³	24 Cr 4s ¹ 3d ⁵	25 Mn 4s ² 3d ⁵	26 Fe 4s ² 3d ⁶	27 Co 4s ² 3d ⁷	28 Ni 4s ² 3d ⁸	29 Cu 4s ¹ 3d ¹⁰	30 Zn 4s ² 3d ¹⁰	31 Ga 4s ² 3d ¹⁰ 4p ¹	32 Ge 4s ² 3d ¹⁰ 4p ²	33 As 4s ² 3d ¹⁰ 4p ³	34 Se 4s ² 3d ¹⁰ 4p ⁴	35 Br 4s ² 3d ¹⁰ 4p ⁵	36 Kr 4s ² 3d ¹⁰ 4p ⁶
5	O	37 Rb 5s ¹	38 Sr 5s ²	39 Y 5s ² 4d ¹																		40 Zr 5s ² 4d ²	41 Nb 5s ¹ 4d ⁴	42 Mo 5s ¹ 4d ⁵	43 Tc 5s ² 4d ⁵	44 Ru 5s ¹ 4d ⁷	45 Rh 5s ¹ 4d ⁸	46 Pd 4d ¹⁰	47 Ag 5s ¹ 4d ¹⁰	48 Cd 5s ² 4d ¹⁰	49 In 5s ² 4d ¹⁰ 5p ¹	50 Sn 5s ² 4d ¹⁰ 5p ²	51 Sb 5s ² 4d ¹⁰ 5p ³	52 Te 5s ² 4d ¹⁰ 5p ⁴	53 I 5s ² 4d ¹⁰ 5p ⁵	54 Xe 5s ² 4d ¹⁰ 5p ⁶
6	P	55 Cs 6s ¹	56 Ba 6s ²	57 La 6s ² 5d ¹	58 Ce 6s ² 4f ¹ 5d ¹	59 Pr 6s ² 4f ³	60 Nd 6s ² 4f ⁴	61 Pm 6s ² 4f ⁵	62 Sm 6s ² 4f ⁶	63 Eu 6s ² 4f ⁷	64 Gd 6s ² 4f ⁷ 5d ¹	65 Tb 6s ² 4f ⁹	66 Dy 6s ² 4f ¹⁰	67 Ho 6s ² 4f ¹¹	68 Er 6s ² 4f ¹²	69 Tm 6s ² 4f ¹³	70 Yb 6s ² 4f ¹⁴	71 Lu 6s ² 4f ¹⁴ 5d ¹	72 Hf 6s ² 4f ¹⁴ 5d ²	73 Ta 6s ² 4f ¹⁴ 5d ³	74 W 6s ² 4f ¹⁴ 5d ⁴	75 Re 6s ² 4f ¹⁴ 5d ⁵	76 Os 6s ² 4f ¹⁴ 5d ⁶	77 Ir 6s ² 4f ¹⁴ 5d ⁷	78 Pt 6s ¹ 4f ¹⁴ 5d ⁹	79 Au 6s ¹ 4f ¹⁴ 5d ¹⁰	80 Hg 6s ² 4f ¹⁴ 5d ¹⁰	81 Tl 6s ² 4f ¹⁴ 5d ¹⁰ 6p ¹	82 Pb 6s ² 4f ¹⁴ 5d ¹⁰ 6p ²	83 Bi 6s ² 4f ¹⁴ 5d ¹⁰ 6p ³	84 Po 6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁴	85 At 6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁵	86 Rn 6s ² 4f ¹⁴ 5d ¹⁰ 6p ⁶			
7	Q	87 Fr 7s ¹	88 Ra 7s ²	89 Ac 7s ² 6d ¹	90 Th 7s ² 6d ²	91 Pa 7s ² 5f ² 6d ¹	92 U 7s ² 5f ³ 6d ¹	93 Np 7s ² 5f ⁴ 6d ¹	94 Pu 7s ² 5f ⁶	95 Am 7s ² 5f ⁷	96 Cm 7s ² 5f ⁷ 6d ¹	97 Bk 7s ² 5f ⁹	98 Cf 7s ² 5f ¹⁰	99 Es 7s ² 5f ¹¹	100 Fm 7s ² 5f ¹²	101 Md 7s ² 5f ¹³	102 No 7s ² 5f ¹⁴	103 Lr 7s ² 5f ¹⁴ 6d ¹	104 Rf 7s ² 5f ¹⁴ 6d ²	105 Db 7s ² 5f ¹⁴ 6d ³	106 Sg 7s ² 5f ¹⁴ 6d ⁴	107 Bh 7s ² 5f ¹⁴ 6d ⁵	108 Hs 7s ² 5f ¹⁴ 6d ⁶	109 Mt 7s ² 5f ¹⁴ 6d ⁷	110 Ds 7s ² 5f ¹⁴ 6d ⁸	111 Rg 7s ¹ 5f ¹⁴ 6d ¹⁰	112 Cn 7s ² 5f ¹⁴ 6d ¹⁰	113 Uut 7s ² 5f ¹⁴ 6d ¹⁰ 7p ¹	114 Fl 7s ² 5f ¹⁴ 6d ¹⁰ 7p ²	115 Uup 7s ² 5f ¹⁴ 6d ¹⁰ 7p ³	116 Lv 7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁴	117 Uus 7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁵	118 Uuo 7s ² 5f ¹⁴ 6d ¹⁰ 7p ⁶			

Metale alkaliczne	Metale ziem alkalicznych	Lantanowce/Aktynowce	Metale przejściowe	Metale bloku p	Półmetale	Niemetale	Halogeny	Gazy szlachetne
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K (2 elementy)	L (8 elementy)	M (8 elementy)	N (18 elementy)	O (18 elementy)	P (32 elementy)	Q (32 elementy)
1s	2s, 2p	3s, 3p	4s, 3d, 4p	5s, 4d, 5p	6s, 4f, 5d, 6p	7s, 5f, 6d, 7p...
2 x 1 ² = 2 e ⁻	2 x 2 ² = 8 e ⁻	2 x 3 ² = 18 e ⁻	2 x 4 ² = 32 e ⁻	2 x 5 ² = 50 e ⁻	2 x 6 ² = 72 e ⁻	2 x 7 ² = 98 e ⁻

Orbitale atomowe	s = 2 elektrony (e ⁻)	p = 6 e ⁻	d = 10 e ⁻	f = 14 e ⁻
	1. i 2. grupa główna (IA, IIA)	3. do 8. grupa główna (IIIA – VIIIA)	8 (lub 10) grupy poboczne (IB – VIIIB)	Lantanowce / Aktynowce