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The history of the periodic table

Use these images to illustrate the table's development



Dalton's Atoms





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Döbereiner's Triads

	Elements	Symbol	Atomic Mass
	Lithium	Li	6.9
1	Sodium	Na	23
	Potassium	K	39
	Calcium	Ca	40.1
2	Strontium	Sr	87.6
	Barium	Ba	137.3
	Chlorine	CI	35.5
3	Bromine	Br	79.9
	lodine	1	126.9
	Sulfur	S	32
4	Selenium	Se	79
	Tellurium	Те	128



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Lothar Meyer's periodic table

			l	l	I	I
	4 werthig	3 werthig	2 werthig	1 werthig	1 werthig	2 werthig
	-	-	-	-	Li = 7,03	(Be =9,3?)
Differenz =	-	-	-	-	16,02	(14,7)
	C = 12,0	N = 14,04	O = 16,00	Fl = 19,0	Na = 23,05	Mg = 24,0
Differenz =	16,5	16,96	16,07	16,46	16,08	16,0
	Si = 28,5	P = 31,0	S = 32,07	Cl = 35,46	K = 39,13	Ca = 40,0
Differenz =	89,1 /2 = 44,55	44,0	46,7	44,51	46,3	47,6
	-	As = 75,0	Se = 78,8	Br = 79,97	Rb =85,4	Sr = 87,6
Differenz =	89,1 /2 = 44,55	45,6	49,5	46,8	47,6	49,5
	Sn = 117,6	Sb = 120,6	Te = 128,3	J =126,8	Cs = 133,0	Ba = 137,1
Differenz =	89,4 = 2*44,7	87,4 = 2*43,7	-	-	(71 = 2*35,5)	-
	Pb = 207,0	Bi = 208,0	-	-	(Tl = 204?)	-



Mendeleev's periodic table

Н							
Li	Be	В	В	N	0	F	
Na	Mg	AI	Si	Р	S	CI	
К	Ca		Ti	V	Cr	Mn	Fe, Co, Ni
Cu	Zn			As	Se	Br	
Rb	Sr	Y	Zr	Nb	Мо		Ru, Rh, Pd
Ag	Cd	In	Sn	Sb	Те	1	
Cs	Ba	Di?	Ce?				
		Er?	La?	Та	w		Os, Ir, Pt
Au	Hg	TI	Pb	Bi			
			Th		U		-



Mendeleev's periodic table, 2

н		30					
Li	Be	В	В	N	0	F	
Na	Mg	AI	Si	Р	S	CI	
К	Ca	Eka-B	Ti	V	Cr	Mn	Fe, Co, Ni
Cu	Zn	Eka-Al	Eka-SI	As	Se	Br	
Rb	Sr	Y	Zr	Nb	Мо		Ru, Rh, Pd
Ag	Cd	In	Sn	Sb	Те	1	
Cs	Ba	Di?	Ce?				
		Er?	La?	Та	w		Os, Ir, Pt
Au	Hg	TI	Pb	Bi			
			Th		U		



Mendeleev's periodic table, 3

н							
Li	Be	В	В	N	0	F	
Na	Mg	AI	Si	Р	S	CI	
К	Ca	Sc	Ti	V	Cr	Mn	Fe, Co, Ni
Cu	Zn	Ga	Ge	As	Se	Br	
Rb	Sr	Y	Zr	Nb	Мо	Тс	Ru, Rh, Pd
Ag	Cd	In	Sn	Sb	Те	1	
Cs	Ba	La	Hf	Та	W	Re	Os, Ir, Pt
Au	Hg	TI	Pb	Bi	Po	At	
			Th		U		

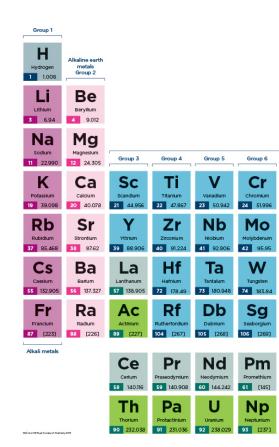


Mendeleev's periodic table, 4

	н							
He	Li	Be	Bc	С	N	0	F	
Ne	Na	Mg	AI	Si	Р	S	CI	
A.,	К	Ca	Sc	Ti	V	Cr	Mn	Fe, Co, Ni
Ar	Cu	Zn	Ga	Ge	As	Se	Br	
Kr	Rb	Sr	Y	Zr	Nb	Мо	Тс	Ru, Rh, Pd
ĸr	Ag	Cd	In	Sn	Sb	Те	1	
Xe	Cs	Ba	La	Hf	Та	W	Re	Os, Ir, Pt
Ye	Au	Hg	ті	Pb	Bi	Po	At	
Rn				Th		U		



Today's periodic table



These are the 118 currently known and officially named elements that make up the periodic table (IUPAC 2016).

The periodic table arranges the elements, with their diverse physical and chemical properties, in order of atomic number and fits them into a logical pattern. Eighteen columns divide the elements into groups with closely related physical properties. The rows are called series or periods. The lanthanides are included in the sixth period. and the actinides are part of the seventh period. Properties of elements change in a systematic way through a period.

Atomic number The atomic number is equal to the number of protons in the nucleus.

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1.008 Relative atomic mass The ratio of the average mass of the various isotopic forms of an element to one-twelfth of the mass of a carbon-12 atom in its ground state. A number in brackets indicates that all isotopes of the element are unstable, ie radioactive.

Transition me	atals				
Group 7	Group 8	Group 9	Group 10	Group 11	Group 12
	-	-		-	
Mn	Fe	Co	Ni	Cu	Zn
Manganese	Iron	Cobalt	Nickel	Copper	Zinc
25 54.938	26 55.845	27 58.933	28 58.693	29 63.546	30 65.38
Тс	Ru	Rh	Pd	٨a	Cd
				Ag	
Technetium	Ruthenium	Rhodium	Palladium	Silver	Cadmium
43 [98]	44 101.07	45 102.906	46 106.42	47 107.868	48 112.414
Re	Os	Ir	Pt	Au	Hg
Rhenium	Osmlum	Iridium	Platinum	Gold	Mercury
75 186.207	76 190.23	77 192.217	78 195.084	79 196.967	80 200.592
Bh	Цe	MAL	De	De	C m
BU	Hs	Mt	Ds	Rg	Cn
Bohrium	Hassium	Meltnerium	Darmstadtium	Roentgenium	Copernicium
107 [270]	108 [269]	109 [278]	110 [281]	111 [280]	112 [285]
Sm	Eu	Gd	Th	Dv	Ho

Sm	Eu	Gd	Tb	Dy	Но
Samarium	Europium	Gadolinium	Terblum	Dysprosium	Holmium
62 150.36	63 151.964	64 157.25	65 158.925	66 162.500	67 164.930
Pu	Am	Cm	Bk	Cf	Es
Plutonium	Americium	Curlum	Berkelium	Californium	Einsteinium
94 [244]	95 [243]	96 [247]	97 [247]	98 [251]	99 [252]



Md

Mendelevium

101 [258]

Fermium

100 [257]

No

Nobelium

102 [259]

Actinides

Lawrenclum

103 [262]