

The first 30 elements of the periodic table: names, symbols, atomic numbers, masses and valency

No.	Element	Symbol	Atomic mass	Valency	No.	Element	Symbol	Atomic mass	Valency
1	Hydrogen	H	1	1	16	Sulfur	S	32	2, 4, 6
2	Helium	He	4	0	17	Chlorine	Cl	35.5	1
3	Lithium	Li	7	1	18	Argon	Ar	40	0
4	Beryllium	Be	9	2	19	Potassium	K	39	1
5	Boron	B	11	3	20	Calcium	Ca	40	2
6	Carbon	C	12	4	21	Scandium	Sc	45	3
7	Nitrogen	N	14	3	22	Titanium	Ti	48	4, 3
8	Oxygen	O	16	2	23	Vanadium	V	51	5, 4, 3, 2
9	Fluorine	F	19	1	24	Chromium	Cr	52	3, 6, 2
10	Neon	Ne	20	0	25	Manganese	Mn	55	2, 4, 7
11	Sodium	Na	23	1	26	Iron	Fe	56	2, 3
12	Magnesium	Mg	24	2	27	Cobalt	Co	59	2, 3
13	Aluminium	Al	27	3	28	Nickel	Ni	59	2
14	Silicon	Si	28	4	29	Copper	Cu	63.5	1, 2
15	Phosphorus	P	31	3, 5	30	Zinc	Zn	65	2

Masses are the rounded values used in school calculations. Valency: the first number is the common one; the exam tells you which applies for a transition metal.

The three mnemonics (one per period block)

1 to 10 Happy Henry Likes Beans But Cannot Nibble Orange Fruit Neatly (H He Li Be B C N O F Ne)

Hinglish: Hi Hema, Lekin Beta Bahut Chai Nahi, Odh Fir Neend

11 to 18 Naughty Magpies Always Sit Perfectly Still, Clearly Arguing (Na Mg Al Si P S Cl Ar)

Hinglish: Nana Maange Aloo, Sita Pa Se Class Aram

19 to 30 Kind Cats Scare Tiny Voles; Crows Moan, Ferrets Cough, Nightingales Cut Zinc (K Ca Sc Ti V Cr Mn Fe

Co Ni Cu Zn)

Hinglish: Kaka Car Scooter Tikka Vada, Cricket Manoranjan, Fenko Coin, Nikal Cup Zinda

Three tricks

Atomic number = the word's position in its sentence (the second sentence starts at 11, the third at 19). Mass is about twice the atomic number for elements 1 to 20; learn the six that break it: H 1, Be 9, N 14, Cl 35.5, Ar 40, K 39. Valency for Li to Ne and again for Na to Ar reads 1, 2, 3, 4, 3, 2, 1, 0.

Test yourself: fill in the blanks from memory

Day 4 of the plan, then once a week for a month. Fill symbol, atomic mass and valency; check against page 1; write the misses five times.

No.	Element	Symbol	Mass	Valency
1	Hydrogen			
2	Helium			
3	Lithium			
4	Beryllium			
5	Boron			
6	Carbon			
7	Nitrogen			
8	Oxygen			
9	Fluorine			
10	Neon			
11	Sodium			
12	Magnesium			
13	Aluminium			
14	Silicon			
15	Phosphorus			

No.	Element	Symbol	Mass	Valency
16	Sulfur			
17	Chlorine			
18	Argon			
19	Potassium			
20	Calcium			
21	Scandium			
22	Titanium			
23	Vanadium			
24	Chromium			
25	Manganese			
26	Iron			
27	Cobalt			
28	Nickel			
29	Copper			
30	Zinc			

The four-day plan

Day 1 Sentence one, written three times with the symbols; read the ten rows once. Ten minutes.

Day 2 Sentence two the same way; sentence one from memory first.

Day 3 Sentence three; both earlier ones from memory. Fifteen minutes.

Day 4 This blank grid from memory; check; write the misses five times.

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