

Effective Nuclear Charge

Name	Z	n - 2	n - 1	n	Z*		
Hydrogen	1				1s	1-[0*0.30]	1.00
Helium	2			1	1s	2-[1*0.30]	1.70
Lithium	3		2		2s	3-[(2*0.85) + (0*0.35)]	1.30
	3			1	1s	3-[1*0.30]	2.70
Beryllium	4		2	1	2s	4-[(2*0.85) + (1*0.35)]	1.95
	4			1	1s	4-[1*0.30]	3.70
Boron	5		2	2	2s, 2p	5-[(2*0.85) + (2*0.35)]	2.60
	5			1	1s	5-[1*0.30]	4.70
Carbon	6		2	3	2s, 2p	6-[(2*0.85) + (3*0.35)]	3.25
	6			1	1s	6-[1*0.30]	5.70
Nitrogen	7		2	4	2s, 2p	7-[(2*0.85) + (4*0.35)]	3.90
	7			1	1s	7-[1*0.30]	6.70
Oxygen	8		2	5	2s, 2p	8-[(2*0.85) + (5*0.35)]	4.55
	8			1	1s	8-[1*0.30]	7.70
Fluorine	9		2	6	2s, 2p	9-[(2*0.85) + (6*0.35)]	5.20
	9			1	1s	9-[1*0.30]	8.70
Neon	10		2	7	2s, 2p	10-[(2*0.85) + (7*0.35)]	5.85
	10			1	1s	10-[1*0.30]	9.70
Sodium	11	2	8		3s	11-[(2*1) + (8*0.85) + (0*0.35)]	2.20
	11		2	7	2s, 2p	11-[(2*0.85) + (7*0.35)]	6.85
	11			1	1s	11-[1*0.30]	10.70
Magnesium	12	2	8	1	3s	12-[(2*1) + (8*0.85) + (1*0.35)]	2.85
	12		2	7	2s, 2p	12-[(2*0.85) + (7*0.35)]	7.85
	12			1	1s	12-[1*0.30]	11.70
Aluminum	13	2	8	2	3s, 3p	13-[(2*1) + (8*0.85) + (2*0.35)]	3.50
	13		2	7	2s, 2p	13-[(2*0.85) + (7*0.35)]	8.85
	13			1	1s	13-[1*0.30]	12.70
Silicon	14	2	8	3	3s, 3p	14-[(2*1) + (8*0.85) + (3*0.35)]	4.15
	14		2	7	2s, 2p	14-[(2*0.85) + (7*0.35)]	9.85
	14			1	1s	14-[1*0.30]	13.70
Phosphorus	15	2	8	4	3s, 3p	15-[(2*1) + (8*0.85) + (4*0.35)]	4.80
	15		2	7	2s, 2p	15-[(2*0.85) + (7*0.35)]	10.85
	15			1	1s	15-[1*0.30]	14.70
Sulfur	16	2	8	5	3s, 3p	16-[(2*1) + (8*0.85) + (5*0.35)]	5.45
	16		2	7	2s, 2p	16-[(2*0.85) + (7*0.35)]	11.85
	16			1	1s	16-[1*0.30]	15.70

Chlorine	17	2	8	6	3s, 3p	$17-[(2*1) + (8*0.85) + (6*0.35)]$	6.10
	17		2	7	2s, 2p	$17-[(2*0.85) + (7*0.35)]$	12.85
	17			1	1s	$17-[1*0.30]$	16.70
Argon	18	2	8	7	3s, 3p	$18-[(2*1) + (8*0.85) + (7*0.35)]$	6.75
	18		2	7	2s, 2p	$18-[(2*0.85) + (7*0.35)]$	13.85
	18			1	1s	$18-[1*0.30]$	17.70
Potassium	19	10	8		4s	$19-[(10*1) + (8*0.85) + (0*0.35)]$	2.20
	19	2	8	7	3s, 3p	$19-[(2*1) + (8*0.85) + (7*0.35)]$	7.75
	19		2	7	2s, 2p	$19-[(2*0.85) + (7*0.35)]$	14.85
	19			1	1s	$19-[1*0.30]$	18.70
Calcium	20	10	8	1	4s	$20-[(10*1) + (8*0.85) + (1*0.35)]$	2.85
	20	2	8	7	3s, 3p	$20-[(2*1) + (8*0.85) + (7*0.35)]$	8.75
	20		2	7	2s, 2p	$20-[(2*0.85) + (7*0.35)]$	15.85
	20			1	1s	$20-[1*0.30]$	19.70
Scandium	21	10	9	1	4s	$21-[(10*1)+(9*0.85)+(1*0.35)]$	3.00
	21	18			3d	$21-[(18*1)+(0*0.35)]$	3.00
	21	2	8	7	3s, 3p	$21-[(2*1) + (8*0.85) + (7*0.35)]$	9.75
	21		2	7	2s, 2p	$21-[(2*0.85) + (7*0.35)]$	16.85
	21			1	1s	$21-[1*0.30]$	20.70
Titanium	22	10	10	1	4s	$22-[(10*1) + (10*0.85) + (1*0.35)]$	3.15
	22	18		1	3d	$22-[(18*1) + (1*0.35)]$	3.65
	22	2	8	7	3s, 3p	$22-[(2*1) + (8*0.85) + (7*0.35)]$	10.75
	22		2	7	2s, 2p	$22-[(2*0.85) + (7*0.35)]$	17.85
	22			1	1s	$22-[1*0.30]$	21.70
Vanadium	23	10	11	1	4s	$23-[(10*1) + (11*0.85) + (1*0.35)]$	3.30
	23	18		2	3d	$23-[(18*1) + (2*0.35)]$	4.30
	23	2	8	7	3s, 3p	$23-[(2*1) + (8*0.85) + (7*0.35)]$	11.75
	23		2	7	2s, 2p	$23-[(2*0.85) + (7*0.35)]$	18.85
	23			1	1s	$23-[1*0.30]$	22.70
Chromium	24	10	13		4s	$24-[(10*1) + (13*0.85) + (0*0.35)]$	2.95
	24	18		4	3d	$24-[(18*1) + (4*0.35)]$	4.60
	24	2	8	7	3s, 3p	$24-[(2*1) + (8*0.85) + (7*0.35)]$	12.75
	24		2	7	2s, 2p	$24-[(2*0.85) + (7*0.35)]$	19.85
	24			1	1s	$24-[1*0.30]$	23.70

Manganese	25	10	13	1	4s	$25 - [(10 \cdot 1) + (13 \cdot 0.85) + (1 \cdot 0.35)]$	3.60
	25	18		4	3d	$25 - [(18 \cdot 1) + (4 \cdot 0.35)]$	5.60
	25	2	8	7	3s, 3p	$25 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	13.75
	25		2	7	2s, 2p	$25 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	20.85
	25			1	1s	$25 - [1 \cdot 0.30]$	24.70
Iron	26	10	14	1	4s	$26 - [(10 \cdot 1) + (14 \cdot 0.85) + (1 \cdot 0.35)]$	3.75
	26	18		5	3d	$26 - [(18 \cdot 1) + (5 \cdot 0.35)]$	6.25
	26	2	8	7	3s, 3p	$26 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	14.75
	26		2	7	2s, 2p	$26 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	21.85
	26			1	1s	$26 - [1 \cdot 0.3]$	25.70
Cobalt	27	10	15	1	4s	$27 - [(10 \cdot 1) + (15 \cdot 0.85) + (1 \cdot 0.35)]$	3.90
	27	18		6	3d	$27 - [(18 \cdot 1) + (6 \cdot 0.35)]$	6.90
	27	2	8	7	3s, 3p	$27 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	15.75
	27		2	7	2s, 2p	$27 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	22.85
	27			1	1s	$27 - [1 \cdot 0.30]$	26.70
Nickel	28	10	16	1	4s	$28 - [(10 \cdot 1) + (16 \cdot 0.85) + (1 \cdot 0.35)]$	4.05
	28	18		7	3d	$28 - [(18 \cdot 1) + (7 \cdot 0.35)]$	7.55
	28	2	8	7	3s, 3p	$28 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	16.75
	28		2	7	2s, 2p	$28 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	23.85
	28			1	1s	$28 - [1 \cdot 0.30]$	27.70
Copper	29	10	18		4s	$29 - [(10 \cdot 1) + (18 \cdot 0.85) + (0 \cdot 0.35)]$	3.70
	29	18		9	3d	$29 - [(18 \cdot 1) + (9 \cdot 0.35)]$	7.85
	29	2	8	7	3s, 3p	$29 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	17.75
	29		2	7	2s, 2p	$29 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	24.85
	29			1	1s	$29 - [1 \cdot 0.30]$	28.70
Zinc	30	10	18	1	4s	$30 - [(10 \cdot 1) + (18 \cdot 0.85) + (1 \cdot 0.35)]$	4.35
	30	18		9	3d	$30 - [(18 \cdot 1) + (9 \cdot 0.35)]$	8.85
	30	2	8	7	3s, 3p	$30 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	18.75
	30		2	7	2s, 2p	$30 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	25.85
	30			1	1s	$30 - [1 \cdot 0.30]$	29.70
Gallium	31	10	18	2	4s, 4p	$31 - [(10 \cdot 1) + (18 \cdot 0.85) + (2 \cdot 0.35)]$	5.00
	31	18		9	3d	$31 - [(18 \cdot 1) + (9 \cdot 0.35)]$	9.85
	31	2	8	7	3s, 3p	$31 - [(2 \cdot 1) + (8 \cdot 0.85) + (7 \cdot 0.35)]$	19.75
	31		2	7	2s, 2p	$31 - [(2 \cdot 0.85) + (7 \cdot 0.35)]$	26.85
	31			1	1s	$31 - [1 \cdot 0.30]$	30.70

Germanium	32	10	18	3	4s, 4p	$32 - [(10 \times 1) + (18 \times 0.85) + (3 \times 0.35)]$	5.65
	32	18		9	3d	$32 - [(18 \times 1) + (9 \times 0.35)]$	10.85
	32	2	8	7	3s, 3p	$32 - [(2 \times 1) + (8 \times 0.85) + (7 \times 0.35)]$	20.75
	32		2	7	2s, 2p	$32 - [(2 \times 0.85) + (7 \times 0.35)]$	27.85
	32			1	1s	$32 - [1 \times 0.30]$	31.70
Arsenic	33	10	18	4	4s, 4p	$33 - [(10 \times 1) + (18 \times 0.85) + (4 \times 0.35)]$	6.30
	33	18		9	3d	$33 - [(18 \times 1) + (9 \times 0.35)]$	11.85
	33	2	8	7	3s, 3p	$33 - [(2 \times 1) + (8 \times 0.85) + (7 \times 0.35)]$	21.75
	33		2	7	2s, 2p	$33 - [(2 \times 0.85) + (7 \times 0.35)]$	28.85
	33			1	1s	$33 - [1 \times 0.30]$	32.70
Selenium	34	10	18	5	4s, 4p	$34 - [(10 \times 1) + (18 \times 0.85) + (5 \times 0.35)]$	6.95
	34	18		9	3d	$34 - [(18 \times 1) + (9 \times 0.35)]$	12.85
	34	2	8	7	3s, 3p	$34 - [(2 \times 1) + (8 \times 0.85) + (7 \times 0.35)]$	22.75
	34		2	7	2s, 2p	$34 - [(2 \times 0.85) + (7 \times 0.35)]$	29.85
	34			1	1s	$34 - [1 \times 0.30]$	33.70
Bromine	35	10	18	6	4s, 4p	$35 - [(10 \times 1) + (18 \times 0.85) + (6 \times 0.35)]$	7.60
	35	18		9	3d	$35 - [(18 \times 1) + (9 \times 0.35)]$	13.85
	35	2	8	7	3s, 3p	$35 - [(2 \times 1) + (8 \times 0.85) + (7 \times 0.35)]$	23.75
	35		2	7	2s, 2p	$35 - [(2 \times 0.85) + (7 \times 0.35)]$	30.85
	35			1	1s	$35 - [1 \times 0.30]$	34.70
Krypton	36	10	18	7	4s, 4p	$36 - [(10 \times 1) + (18 \times 0.85) + (7 \times 0.35)]$	8.25
	36	18		9	3d	$36 - [(18 \times 1) + (9 \times 0.35)]$	14.85
	36	2	8	7	3s, 3p	$36 - [(2 \times 1) + (8 \times 0.85) + (7 \times 0.35)]$	24.75
	36		2	7	2s, 2p	$36 - [(2 \times 0.85) + (7 \times 0.35)]$	31.85
	36			1	1s	$36 - [1 \times 0.30]$	35.70

<http://calistry.org/calculate/slaterRuleCalculator>