

## Graphing Covalent Atomic Radii

Construct a graph showing the relationship between atomic number and the covalent atomic radius of atoms in periods two through five.

1. Number the x-axis of your graph from 0 to 54.
2. Label the x-axis "Atomic Number."
3. Number the y-axis from 0 to 2.2.
4. Label the y-axis "Atomic Radius in Angstroms."
5. Plot the data below on your graph

Element	Atomic Number	Atomic Radius (Å)	Element	Atomic Number	Atomic Radius (Å)
Li	3	1.23	Cu	29	1.17
Be	4	0.89	Zn	30	1.25
B	5	0.88	Ga	31	1.25
C	6	0.77	Ge	32	1.22
N	7	0.70	As	33	1.21
O	8	0.66	Se	34	1.17
F	9	0.64	Br	35	1.14
Na	11	1.57	Rb	37	2.16
Mg	12	1.36	Sr	38	1.92
Al	13	1.25	Y	39	1.62
Si	14	1.17	Zr	40	1.45
P	15	1.10	Nb	41	1.34
S	16	1.04	Mo	42	1.29
Cl	17	0.99	Tc	43	--
K	19	2.03	Ru	44	1.24
Ca	20	1.74	Rh	45	1.25
Sc	21	1.44	Pd	46	1.28
Ti	22	1.32	Ag	47	1.34
V	23	1.22	Cd	48	1.41
Cr	24	1.17	In	49	1.50
Mn	25	1.17	Sn	50	1.40
Fe	26	1.16	Sb	51	1.41
Co	27	1.15	Te	52	1.37
Ni	28	1.17	I	53	1.33

Discuss the trends in atomic radii as you move across the periods of the Periodic Table. Give reasons for these trends. Use complete sentences.

