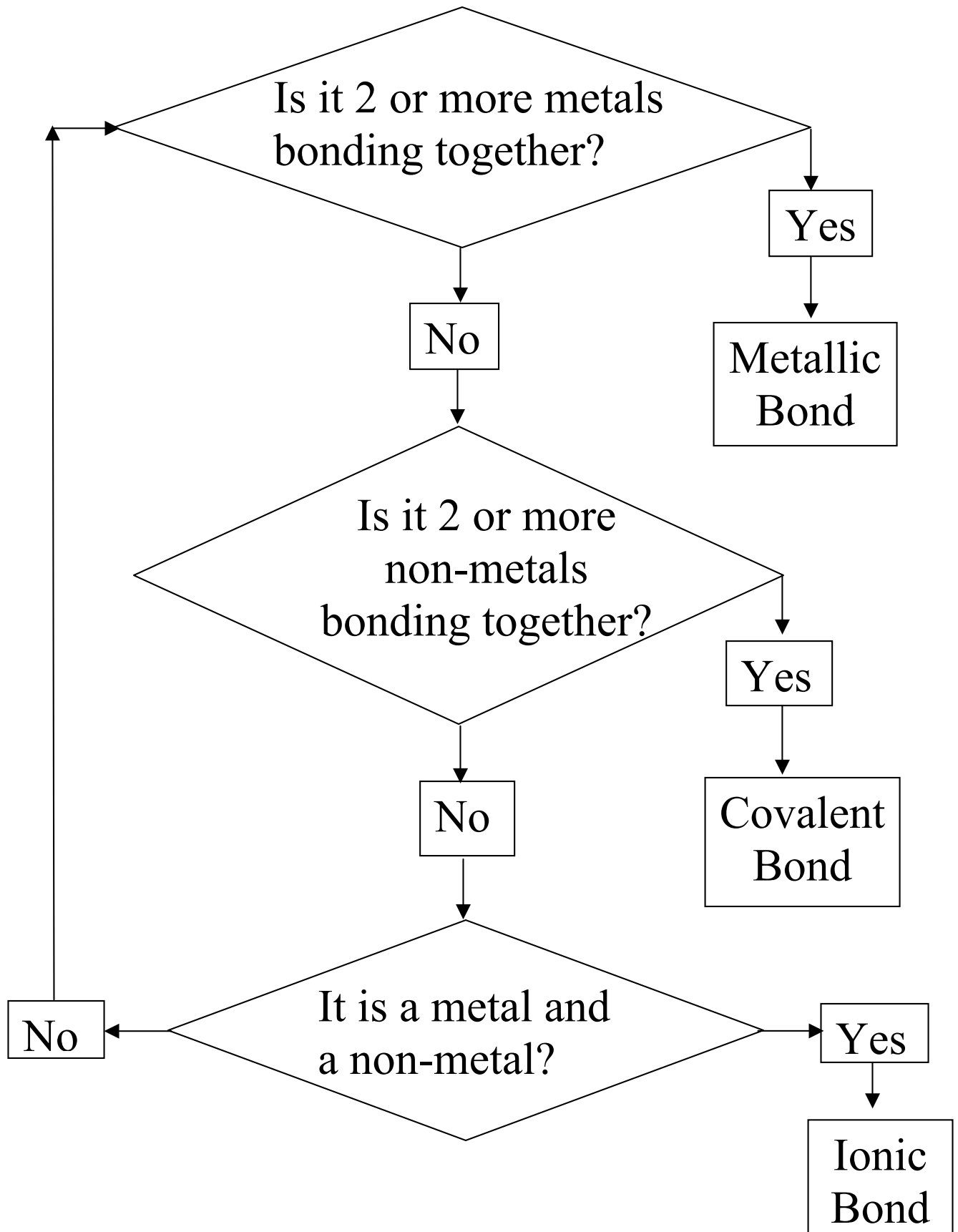


# What kind of bond is it???



## Label the Metals, Non-metals and Metalloids

hydrogen 1 H 1.0079																	helium 2 He 4.0026				
lithium 3 Li 6.941	beryllium 4 Be 9.0122	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <b>Key:</b>                      element name                      atomic number                      symbol                      atomic weight (mean relative mass)                 </div>														boron 5 B 10.811	carbon 6 C 12.011	nitrogen 7 N 14.007	oxygen 8 O 15.999	fluorine 9 F 18.998	neon 10 Ne 20.180
sodium 11 Na 22.990	magnesium 12 Mg 24.305	scandium 21 Sc 44.956	titanium 22 Ti 47.867	vanadium 23 V 50.942	chromium 24 Cr 51.996	manganese 25 Mn 54.938	iron 26 Fe 55.845	cobalt 27 Co 58.933	nickel 28 Ni 58.693	copper 29 Cu 63.546	zinc 30 Zn 65.38	gallium 31 Ga 69.723	germanium 32 Ge 72.61	arsenic 33 As 74.922	selenium 34 Se 78.96	bromine 35 Br 79.904	krypton 36 Kr 83.80				
potassium 19 K 39.098	calcium 20 Ca 40.078	yttrium 39 Y 88.906	zirconium 40 Zr 91.224	niobium 41 Nb 92.906	molybdenum 42 Mo 95.94	technetium 43 Tc [98]	ruthenium 44 Ru 101.07	rhodium 45 Rh 102.91	palladium 46 Pd 106.42	silver 47 Ag 107.87	cadmium 48 Cd 112.41	indium 49 In 114.82	tin 50 Sn 118.71	antimony 51 Sb 121.76	tellurium 52 Te 127.60	iodine 53 I 126.90	xenon 54 Xe 131.29				
rubidium 37 Rb 85.468	strontium 38 Sr 87.62	caesium 55 Cs 132.91	barium 56 Ba 137.33	lutetium 57-70 Lu 174.97	hafnium 71 Hf 178.49	tantalum 72 Ta 180.95	tungsten 73 W 183.84	rhenium 74 Re 186.21	osmium 75 Os 190.23	iridium 76 Ir 192.22	platinum 77 Pt 195.08	gold 78 Au 196.97	mercury 79 Hg 200.59	thallium 80 Tl 204.38	lead 81 Pb 207.2	bismuth 82 Bi 208.98	polonium 83 Po [209]	astatine 84 At [210]	radon 85 Rn [222]		
francium 87 Fr [223]	radium 88 Ra [226]	actinoids 89-102 Ac [227]	actinoids 90 Th 232.04	actinoids 91 Pa 231.04	actinoids 92 U 238.03	actinoids 93 Np [237]	actinoids 94 Pu [244]	actinoids 95 Am [243]	actinoids 96 Cm [247]	actinoids 97 Bk [247]	actinoids 98 Cf [251]	actinoids 99 Es [252]	actinoids 100 Fm [258]	actinoids 101 Md [258]	actinoids 102 No [259]						
		lanthanoids 57 La 138.91	lanthanoids 58 Ce 140.12	lanthanoids 59 Pr 140.91	lanthanoids 60 Nd 144.24	lanthanoids 61 Pm [145]	lanthanoids 62 Sm 150.36	lanthanoids 63 Eu 151.96	lanthanoids 64 Gd 157.25	lanthanoids 65 Tb 158.93	lanthanoids 66 Dy 162.50	lanthanoids 67 Ho 164.93	lanthanoids 68 Er 167.26	lanthanoids 69 Tm 168.93	lanthanoids 70 Yb 173.04						

### Key Words:

**Metallic Bond:** Two metals, electron sea, electrons flowing,

**Ionic Bond:** Cation, Anion, charged particles, metal and non-metal

**Covalent Bond-** Sharing, two non-metals

### You Draw Pictures to help you remember

Metallic	Ionic	Covalent