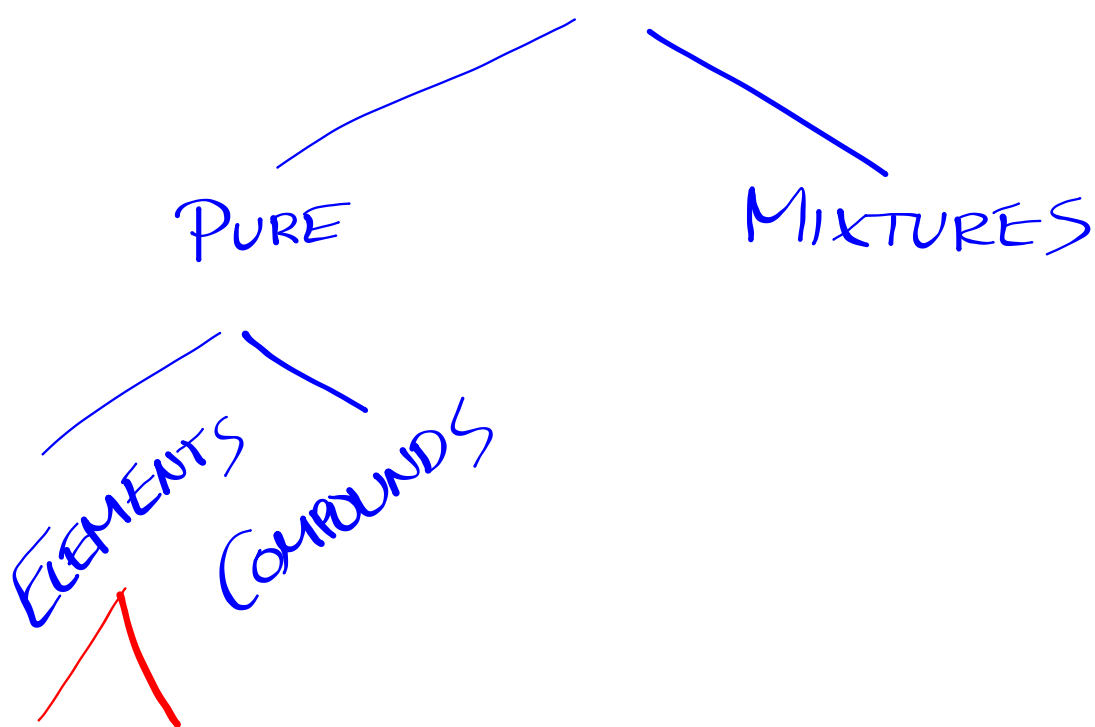


p. 175 #1, 2

- #2 a) hydrogen  $\rightarrow$  element  
b) potassium carbonate  $\rightarrow$  compound  
c) water ( $H_2O$ )  $\rightarrow$  compound  
d) Mg  $\rightarrow$  element

1. a) soapy water  <sup>$H_2O$</sup>   $\rightarrow$  mixture  
b) hydrogen gas  $\rightarrow$  pure  
c) Sodium chloride  $\rightarrow$  pure



## Physical Property

↳ appearance

\* Can be described with senses

## Chemical Property

\* behaviour

$H_2O$   
Water boils

$H_2O$   
water vapor

# Review of the Periodic Table

Periodic table - a structured arrangement of elements that help us explain and predict physical and chemical properties.

Metals are generally located on the left, while the non-metals are located on the right side of the table.  
(staircase line)

**Periodic Table of the Elements**

1	IA																O															
1	H																	He														
2	IIA																		IIIA		IVA	VA	VIA	VIIA	10							
2	Li	Be																	B	C	N	O	F	Ne								
3																			IIIA		IVA	VA	VIA	VIIA	18							
3	Na	Mg	IIIB	IVB	VB	VIB	VIIB	VII							IB	IIB	Al	Si	P	S	Cl	Ar										
4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36														
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr														
5	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54														
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe														
6	55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86														
6	Cs	Ba	*La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn														
7	87	88	89	104	105	106	107	108	109	110	111	112	113																			
7	Fr	Ra	+Ac	Rf	Ha	Sg	Ns	Hs	Mt	110	111	112	113																			
* Lanthanide Series			58	59	60	61	62	63	64	65	66	67	68	69	70	71																
+ Actinide Series			90	91	92	93	94	95	96	97	98	99	100	101	102	103																
			Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr																

**H**  
*Hydrogen*, the lightest element, is the exception to almost every rule in chemistry. Although it is located on the left side of the staircase, it behaves mostly as a **nonmetal**

Metals are normally shiny, malleable, conductors, react with acid, and are mostly solids at room temperature.

Non-metals are generally dull, brittle, good insulators, do not react with acid, and can be solid, liquids or gas at room temperature.

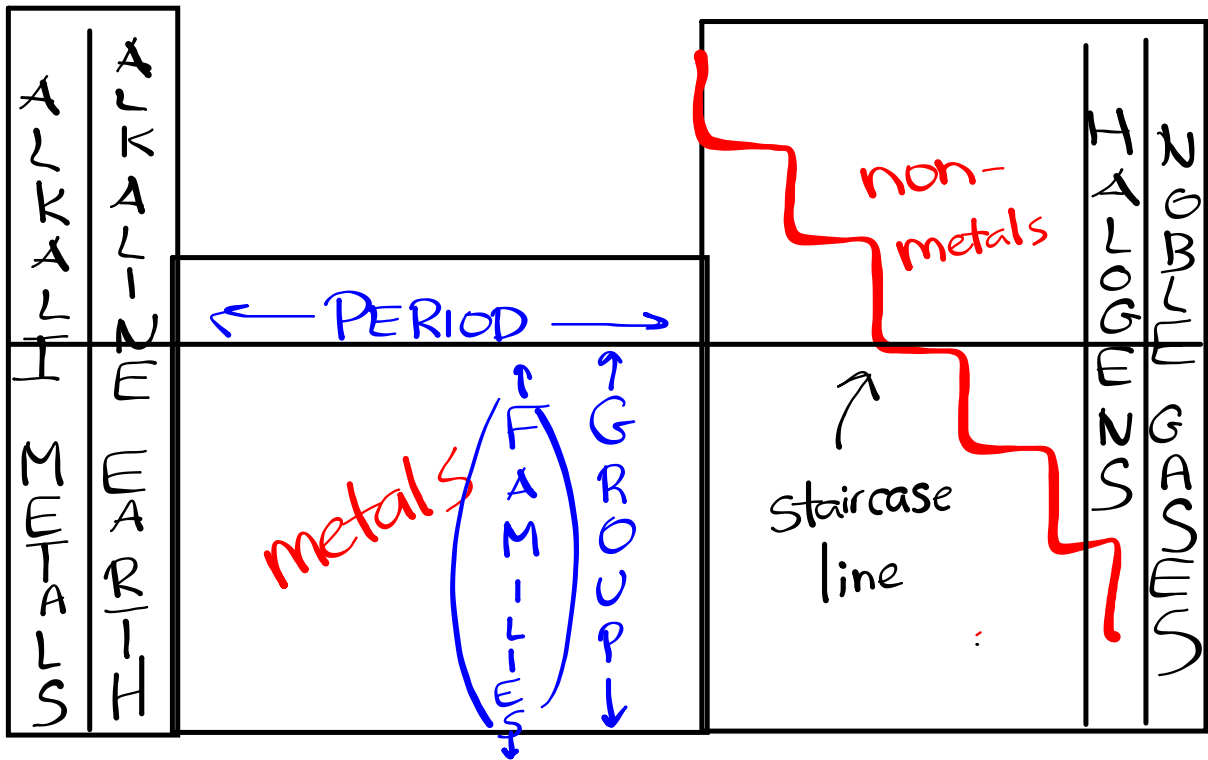
Chemical Families (groups) are vertical columns in the periodic table. They tend to have similar physical and chemical properties.

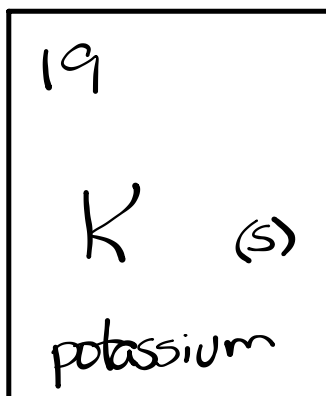
*Alkali metals* (group 1) are shiny, silvery metals and form compounds that are mostly white solids and soluble in water.

*Alkaline earth metals* (group 2) are shiny, silvery metals, but they form compounds that are not soluble in water.

The *halogens* (group 17) generally react with alkali metals.

*Noble gases* (group 18) generally do not form compounds.





fluorine F 9 17 2 nm gas  
halogen

111  
Ununium



## Periodic Table Map