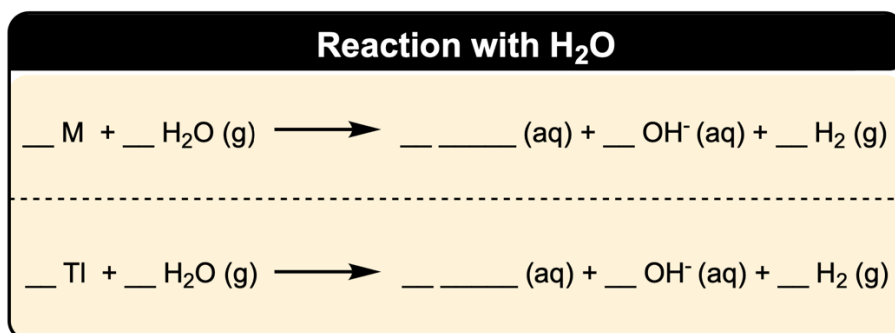


## CONCEPT: BORON FAMILY REACTIONS

- Reactions are driven by the presence of \_\_\_\_ valence electrons in their s and p subshells.
  - Will cover 2 types of reactions: with (1) \_\_\_\_\_ & (2) \_\_\_\_\_.

### (1) Reaction with H<sub>2</sub>O

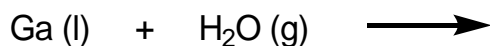
- The Boron Family metals do not react with water, but they do react with \_\_\_\_\_.



- Exception:** Tl possesses a \_\_\_\_ oxidation state.

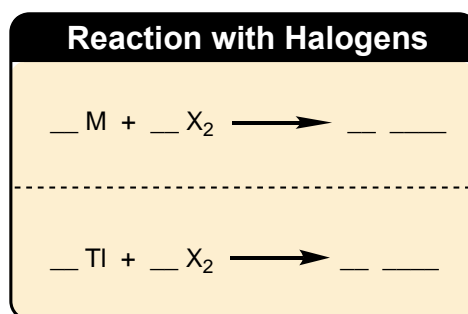
	1A (1)	2A (2)	3A (13)
1	H Hydrogen		
2	Li Lithium	Be Beryllium	B Boron
3	Na Sodium	Mg Magnesium	Al Aluminum
4	K Potassium	Ca Calcium	Ga Gallium
5	Rb Rubidium	Sr Strontium	In Indium
6	Cs Cesium	Ba Barium	Tl Thallium
7	Fr Francium	Ra Radium	Nh Nihonium

**EXAMPLE:** Complete and balance the following reaction.



### (2) Reaction with Halogens

- The Boron Family metals react with halogens to produce \_\_\_\_\_ halide solids.



**EXAMPLE:** Provide the products from the reaction between strontium and aqueous chlorine.

