CONCEPT: GROUP 1A AND 2A REACTIONS

- Alkali metals (1A) and Alkaline Earth metals (2A) undergo numerous reactions.
    - □ 2 types of reactions: with (1) _____ and (2) _____.

(1) Reaction with H_2O

- Both groups react violently with _____ and have high exothermic _____.
    - □ **Recall:** when metals react with an acidic proton, _____ gas is formed.

Reaction with H_2O

(1A): __ M (s) + __ H_2O (l) ⟶ **H_2** (g) + ____ (aq) + _____(aq) + _____

M = 1A or 2A metal

EXAMPLE: Complete and balance the following reaction.

K (s) + H_2O (l) ⟶

PRACTICE: Alkaline earth metals react with certain substances to produce hydrogen gas. Which of the following will result in hydrogen gas formation? Provide a balanced reaction.

a) Beryllium (Be) and O_2

b) Barium (Ba) and CO_2

c) Calcium (Ca) and H_2O

d) Strontium (Sr) and O_2

CONCEPT: GROUP 1A AND 2A REACTIONS

(2) Reaction with Halogens

- Both groups react with halogens to produce _____ halides.

Reaction with Halogens

(1A): __ M (s) + X_2 ⟶ _____ (s)

M = 1A or 2A metal

EXAMPLE: Complete and balance the following reaction.

Li (s) + F_2 (g) ⟶

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