

## 5.2 Worksheet (PS)

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Name: \_\_\_\_\_ / 10

1. Why do atoms of Group 1 elements lose electrons to form cations, whereas atoms of Group 17 elements gain electrons to form anions? (2)

2. Circle the following ions that would be likely to form: (0.5 each)

$\text{Na}^{+2}$     $\text{Cl}^{+1}$     $\text{Ca}^{+2}$     $\text{Br}^{-1}$     $\text{Ne}^{-1}$     $\text{S}^{+2}$

3. Label the following as a metal, nonmetal, or metalloid (or list each) (0.5 each)

- a. Sodium \_\_\_\_\_
- b. Nickel \_\_\_\_\_
- c. Carbon \_\_\_\_\_
- d. Mercury \_\_\_\_\_
- e. Silicon \_\_\_\_\_
- f. Group 2 \_\_\_\_\_
- g. Group 15 \_\_\_\_\_
- h. Group 14, period 4 \_\_\_\_\_

4. Why do elements within a group of the periodic table have similar chemical properties? (2)