

4.3 Representative Groups

Honors Integrated Science

Problem Set

Name_____ Per._____ Date_____

Use the online reading on Representative Groups to help you answer the following questions.

True/False: Determine if the following statements are true or false. Place T for true and F for false on the line provided.

- _____ 1. Hydrogen is an alkali metal.
- _____ 2. Alkali metals are found only in compounds.
- _____ 3. Some alkali metals can float on water.
- _____ 4. Calcium is an alkali metal.
- _____ 5. There is just one group of transition metals.
- _____ 6. Many of the actinides do not occur in nature.
- _____ 7. Elements in the oxygen group have eight valence electrons.
- _____ 8. Selenium is an alkaline Earth metal.
- _____ 9. The halogen group includes only gases.
- _____ 10. Noble gases are found only in combination with other elements.

Multiple-Choice: Write the letter of the correct choice on the line provided.

- 1. _____ Elements in group 1 include
 - a. hydrogen.
 - b. alkali metals.
 - c. alkaline Earth metals.
 - d. two of the above
- 2. _____ Alkali metals are
 - a. soft.
 - b. high in density.
 - c. not very reactive.
 - d. all of the above

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3. _____ Which statement about alkaline Earth metals is true?

- a. They are more reactive than alkali metals.
- b. They are always found combined with other elements.
- c. Some of them are liquids at room temperature.
- d. They are all gold in color.

4. _____ Transition metals tend to

- a. be shiny.
- b. boil at low temperatures.
- c. be very soft.
- d. be extremely reactive.

5. _____ The only nonmetal in the carbon group is

- a. nitrogen.
- b. boron.
- c. carbon.
- d. oxygen.

6. _____ Halogens form salts when they combine with

- a. alkali metals.
- b. alkaline Earth metals.
- c. transition metals.
- d. all metals.

7. _____ Nobles gases are

- a. colorless.
- b. odorless.
- c. reactive.
- d. two of the above

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Match each definition with the correct term.

Terms	a. alkali metal	b. alkaline Earth metal	c. halogen
d. noble gas	e. transition metal	f. group	g. actinide

Definitions

- _____ 1. column of elements in the periodic table
- _____ 2. element in group 18 of the periodic table
- _____ 3. metal in group 1 of the periodic table
- _____ 4. radioactive transition metal
- _____ 5. metal in group 2 of the periodic table
- _____ 6. metal in group 3 of the periodic table
- _____ 7. nonmetal in group 17 of the periodic table

Fill in the blank with the appropriate term on the line provided.

- 1. Elements in the same _____ of the periodic table have the same number of valence electrons.
- 2. The most reactive of all metals are _____ metals.
- 3. All alkaline Earth metals have _____ valence electron(s).
- 4. The lanthanides are metals known as _____ metals.
- 5. Groups 13–16 of the periodic table all contain one or more _____ .
- 6. The most reactive nonmetals belong to the group called the _____ .
- 7. The least reactive elements are in the group called the _____ .