

Name: _____

Chemical Reactions Quiz #1

1. Write properly balanced chemical reactions for each of the following.

a) barium oxide + sulfur (VI) oxide \longrightarrow



b) ammonia + hydrogen iodide \longrightarrow

c) hydrogen chloride + indium (III) oxide \longrightarrow

d) aluminum + sodium chloride \longrightarrow

e) gallium + sulfur \longrightarrow

f) sodium sulfide + ammonium chloride \longrightarrow

2. List four elements with which sulfur should form compounds where it exhibits a positive oxidation state.

3. From their positions on the periodic chart, give all probable oxidation states for the following:

a) P:

(b) S:

(c) Rb:

(d) In

4. Predict all possible formulas for Allogbarium nitride, if any are expected to exist.

Allogbarium is listed in the Star Trek manual as element 115, which is to be discovered in the year 2015 on Martian Colony 3.

5. Rubindium, atomic number 120, is listed in the Star Trek manual as being discovered in the year 2038 in the asteroid belt. What chemistry is expected of Rubindium hydroxide?

6. List two metals that could reduce strontium from strontium chloride.

7. Which of the following would be a better oxidizing agent: Ga, Ge, As, P, N ?

8. Which of the following hydroxides would be most basic: $\text{Zn}(\text{OH})_2$, $\text{Ga}(\text{OH})_3$, $\text{As}(\text{OH})_3$, $\text{Se}(\text{OH})_4$?