PAL Worksheet – Chem 6A

Solubility

1. a) What does *soluble* mean?

   b) What types of compounds do the solubility rules apply to?

2. a) Write the chemical formula for potassium nitride:
   b) According to the solubility rules, is potassium nitride soluble? (circle one) Yes No
   c) Explain your reasoning for your answer in b, above.

   d) If a scoop of solid potassium nitride were put into water and stirred, what species would be present in the water?

   e) Write the balanced "reaction" for the *dissociation* of potassium nitride:

3. What does *dissociation* mean? What does it mean when a solid *dissociates?*

4. a) Write the chemical formula for magnesium sulfide:
   b) According to the solubility rules, is magnesium sulfide soluble? (circle one) Yes No
   c) Explain your reasoning for your answer in b, above.

   d) If a scoop of solid magnesium sulfide were put into water and stirred, what species would be present in the water?

   e) What would you write as the "reaction" for the dissociation of magnesium sulfide? Why?

5. a) Write the chemical formula for sodium sulfide:
   b) According to the solubility rules, is sodium sulfide soluble? (circle one) Yes No
   c) Explain your reasoning for your answer in b, above.

   d) If a scoop of solid sodium sulfide were put into water and stirred, what species would be present in the water?

   e) Write the balanced "reaction" for the dissociation of sodium sulfide:

6. a) Write the chemical formula for barium bromide:
   b) According to the solubility rules, is barium bromide soluble? (circle one) Yes No
   c) Explain your reasoning for your answer in b, above.

   d) If a scoop of solid barium bromide were put into water and stirred, what species would be present in the water?

   e) Write the balanced "reaction" for the dissociation of barium bromide:

7.a) Write the chemical formula for silver bromide:
   b) According to the solubility rules, is silver bromide soluble? (circle one) Yes No
   c) Explain your reasoning for your answer in b, above.

   d) If a scoop of solid silver bromide were put into water and stirred, what species would be present in the water?

   e) Write the balanced "reaction" for the dissociation of silver bromide (careful):

8. a) Use the solubility rules to write three compounds that are soluble in water:

   b) When compounds are soluble in water, what is their physical state labeled as?

9. a) When compounds are *not* soluble in water, what is the term used?

   b) What is the physical state for compounds that are not soluble in water?

   c) Use the solubility rules to write three compounds that are *not* soluble in water: