Should I Stay or Should I Go Quiz

1. What would you do to see if two clear solutions form an insoluble compound? What would you expect to observe?
2. Write correct chemical formulas for the following compounds:
   1. barium chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. sodium carbonate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. ammonium sulfate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. lead(II) nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. calcium nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. sodium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. magnesium bromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   8. potassium carbonate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Which categories of ionic compounds are always soluble?
4. Will the following reactions occur in aqueous solution? If the reaction will occur, write the products of the precipitation reaction. If the reaction will not produce a precipitate, write NR.
   1. NaCl (aq) + Pb(NO3)2 (aq) 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Ca(NO3)2 (aq) + K2CO3 (aq) 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. (NH4)2SO4 (aq) + NaNO3 (aq) 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Answer Key

To see if two clear solutions form an insoluble compound, a few drops of each of the solutions are mixed in a test tube or well of spot plate and stirred. If an insoluble compound forms, a cloudy mixture will form. The cloudy mixture could be white or a different color, but is not transparent.

2. a. BaCl2

b. Na2CO3

c. (NH4)2SO4

d. Pb(NO3)2

e. Ca(NO3)2

f. NaOH

g. MgBr2

h. K2CO3

3. Sodium compounds, potassium compounds, ammonium compounds, and nitrate compounds are always soluble in aqueous solutions.

4.

* 1. 2NaCl (aq) + Pb(NO3)2 (aq) 🡪 PbCl2 (s) + 2NaNO3 (aq)
  2. Ca(NO3)2 (aq) + K2CO3 (aq) 🡪 CaCO3 (s) + 2KNO3 (aq)
  3. (NH4)2SO4 (aq) + NaNO3 (aq) 🡪 NR