Water Practice

Hydrates

1) How are hydrates different from typical ionic compounds?
2) If hydrates contain water, why don't they feel wet?
3) List the ten prefixes and their numerical equivalents that are used to name 1-10 water molecules in a hydrate.

Name the following compounds as hydrates:

4) $K_2SO_4 \cdot 4H_2O$

5) $CaCl_2 \cdot 2H_2O$

6) $CuSO_3 \cdot 7H_2O$

7) $Na_2CO_3 \cdot 10H_2O$

8) $Na_2CO_3 \cdot H_2O$

9) $Ba(C_2H_3O_2)_2 \cdot 3H_2O$

10) $MnSO_4 \cdot 5H_2O$

Solutions and Suspensions

a) Would the following pairs of substances make a <u>solution</u> or a <u>suspension</u>?
b) Explain.

(HINT: Remember, "Like Dissolves Like." Ionic and polar substances will dissolve in one another, and nonpolar substances will dissolve in one another).

11) NaCl and vegetable oil
12) wax and mineral oil
13) water and H_2SO_4
14) vinegar (acetic acid) and oil
15) lighter fluid (butane, C_4H_{10}) and benzene (C_6H_6)
16) $BaBr_2$ and water
17) rubbing alcohol and oil
18) nitrogen gas (N_2) and oxygen gas (O_2)
19) motor oil and corn oil
20) rubbing alcohol and water