

## Worksheet: Solutions, Solubility

1. What is a saturated solution?

2. Carbon tetrachloride is a nonpolar liquid. Water is a polar liquid. Predict which substance would be a good solvent for the following solutes:

a. glucose (polar)

\_\_\_\_\_

b. octane (nonpolar)

\_\_\_\_\_

c. diethyl ether (nonpolar)

\_\_\_\_\_

d. table salt (ionic)

\_\_\_\_\_

3. Determine whether the following are soluble or insoluble salts:

a.  $\text{Pb}(\text{NO}_3)_2$

\_\_\_\_\_

b.  $\text{KOH}$

\_\_\_\_\_

c.  $\text{Ca}_3(\text{PO}_4)_2$

\_\_\_\_\_

d.  $\text{Ag}_2\text{S}$

\_\_\_\_\_

4. Write a net ionic equation for the following reactions. If a precipitate does not form, write "no reaction".

a.  $(\text{NH}_4)_2\text{S}$  and  $\text{Pb}(\text{NO}_3)_2$

b.  $\text{KCl}$  and  $\text{AgClO}_4$

c.  $\text{Na}_3\text{PO}_4$  and  $\text{K}_2\text{SO}_4$