

For all problems except multiple choice/fill-in-the-blank, please show all of your work. The steps you show to solve each problem are as important as the final answer. Notecards and calculators are allowed.

1. How many grams of sodium chloride would be needed to make a 100. mL solution of 0.500 mol/liter sodium chloride?

2. Write the name or formula, where appropriate, for each of the following compounds:

A) sodium phosphate

B) lead (IV) chloride

C) K_2S

D) $Mn(ClO_4)_2$

3. Based on the octet rule, identify the most common monatomic ion formed by each of the following atoms. Write the symbol for the ion including the charge.

A) oxygen

B) aluminum

C) zinc

D) bromine

4. Label the direction of polarity (if any) for the following bonds (see the electronegativity chart if you need):

F – Se

S – O

Ga – S

H – H