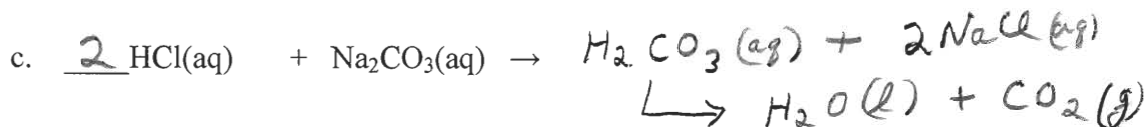
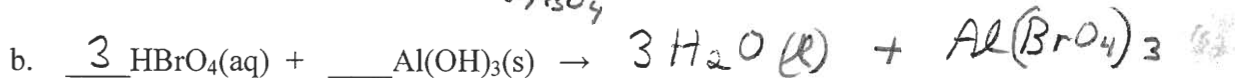
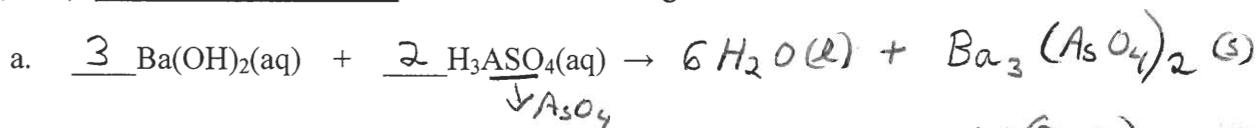


SHOW ALL WORK TO RECEIVE CREDIT.

Atomic masses: **H 1.008, C 12.01, Na 22.99, P 30.97, S 32.07, O 16.00, K 39.01**

1. (9 Pts) **Complete and balance** each of the following reactions:



2. (4 Pts) How many grams of Na_3PO_4 are needed to prepare 700 mL of 3.00 M Na_3PO_4 solution?

$$\frac{\cancel{700 \text{ mL Na}_3\text{PO}_4}}{\cancel{1000 \text{ mL Na}_3\text{PO}_4}} \times \frac{3.00 \text{ mol Na}_3\text{PO}_4}{1 \text{ L}} \times \frac{163.94 \text{ g}}{\text{mol}} = 344 \text{ g Na}_3\text{PO}_4$$

3. (4 Pts) How many grams of Na_3PO_4 are in 445 mL of 3.00 M Na_3PO_4 solution?

$$\frac{445 \text{ mL}}{\cancel{1000 \text{ mL}}} \times \frac{3.00 \text{ mol Na}_3\text{PO}_4}{1 \text{ L}} \times \frac{163.94 \text{ g}}{\text{mol}} = 219 \text{ g Na}_3\text{PO}_4$$

4. (8 Pts) Write the total ionic and net ionic equations for each of the following.

