

Part 2 (total 40 pts)

- 1) What is the chemical formula of chromium (III) sulfate?
(Show work-write the charges & show how they criss-cross.) (5 pts)

TABLE E

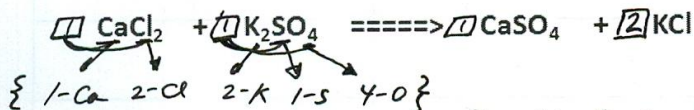


- 2) What is the chemical name of SO_3 ? (5 pts)

$\text{NM} + \text{NM} = \text{covalent}$

Sulfur trioxide

- 3) Calcium chloride reacts with potassium sulfate according to the following imbalanced chemical equation:



- a) What type of reaction is this? Double Replacement

- b) Balance the equation. Write in the correct coefficients. What is the sum of the coefficients (counting both sides of the equation)?

5 (10 pts)

- c) Do an "atom count". What is the total number of atoms of reactants? 10

- 4) A student measured the % water in a hydrate to be 8.5%, but the accepted value 11.0%. What is the %error?

Write the formula. Plug in the numbers. Write the calculated answer. Circle your final (precise) answer. (5pts + 5 pts)

$$\% \text{ Error} = \left| \frac{\text{Measured} - \text{Accepted}}{\text{Accepted}} \right| \times 100$$

take Absolute Value to avoid negatives

$$\% \text{ Error} = \left| \frac{8.5 - 11.0}{11.0} \right| \times 100$$

$$= 22.727 \rightarrow 23\%$$

2 sig figs