

Station 1

1. Balance this equation: $\text{___KClO}_3 \rightarrow \text{___KClO}_4 + \text{___KCl}$
2. What kind of equation is #1?
3. Write the equation and balance: Calcium phosphate reacts with silicon dioxide to produce tetraphosphorus decoxide and calcium silicate (silicate = SiO_3^{2-}).
4. Aluminum hydroxide reacts with hydrogen sulfate...
 - a. What type of reaction is this?
 - b. Write the reactants and predict the products.
 - c. Balance this equation.

Station 2

1. Balance this equation: $\text{___C}_7\text{H}_{16} + \text{___O}_2 \rightarrow \text{___CO}_2 + \text{___H}_2\text{O}$
2. What kind of equation is #1?
3. Write the equation and balance: Iron (III) chloride and ammonium hydroxide react to produce iron (III) hydroxide and ammonium chloride.
4. Magnesium reacts with nitrogen...
 - a. What type of reaction is this?
 - b. Write the reactants and predict the products.
 - c. Balance this equation.

Station 3

1. Write the equation and balance: propanol (C_3H_7OH) reacts with oxygen to produce carbon dioxide and water.
2. What kind of equation is #1?
3. Aluminum reacts with hydrogen chloride...
 - a. What type of reaction is this?
 - b. Write the reactants and predict the products.
 - c. Balance this equation.

Station 4

Solve the following problems:

1. You want to bake a batch of chocolate chip cookies. The recipe calls for 220 grams of sugar. If sugar is $C_{12}H_{22}O_{11}$, how many molecules of sugar did you use?
2. The recipe calls for 2.93×10^{22} molecules of salt. How many mg is this?

Station 5

1. You have 3.66 L of sulfur dioxide gas at STP. What mass is this?
2. How many molecules of chromium (III) sulfate are in 50.0 g?

Station 1

1. Balance this equation: $\underline{4} \text{KClO}_3 \rightarrow \underline{3} \text{KClO}_4 + \underline{\quad} \text{KCl}$

2. What kind of equation is #1? *decomp*

4. Aluminum hydroxide reacts with hydrogen sulfate...

- What type of reaction is this? *DR*
- Write the reactants and predict the products.
- Balance this equation.

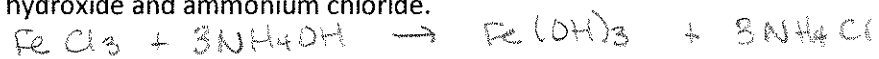


③ Write eqn + balance



Station 2

1. Write the equation and balance: Iron (III) chloride and ammonium hydroxide react to produce iron (III) hydroxide and ammonium chloride.

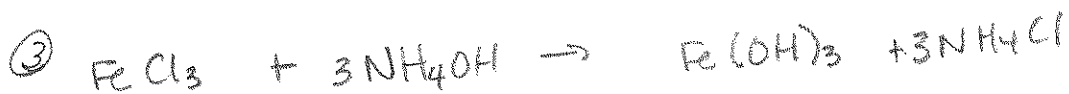


2. What kind of equation is #1?

DR

4. Magnesium reacts with nitrogen...

- a. What type of reaction is this? *Combo*
- b. Write the reactants and predict the products.
- c. Balance this equation.



Station 3

1. Write the equation and balance: propanol (C_3H_7OH) reacts with oxygen to produce carbon dioxide and water.



2. What kind of equation is #1?

Combust.

3. Aluminum reacts with hydrogen chloride...

- a. What type of reaction is this? SR
- b. Write the reactants and predict the products.
- c. Balance this equation.



Station 4

Solve the following problems:

1. You want to bake a batch of chocolate chocolate chip cookies. The recipe calls for 220 grams of sugar. If sugar is $C_{12}H_{22}O_{11}$, how many molecules of sugar did you use?
2. The recipe calls for 2.93×10^{22} molecules of salt. How many mg is this?

$$\textcircled{1} \quad \frac{220 \text{ g}}{342.34 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} \times \frac{6.022 \times 10^{23} \text{ molec}}{1 \text{ mol}} = \boxed{3.9 \times 10^{23} \text{ molec}}$$

$$\textcircled{2} \quad \frac{2.93 \times 10^{22} \text{ molec NaCl}}{6.022 \times 10^{23} \text{ molec}} \times \frac{1 \text{ mol}}{1 \text{ mol}} \times \frac{58.44 \text{ g}}{1 \text{ mol}} \times \frac{1000 \text{ mg}}{1 \text{ g}}$$

$$= \boxed{2340 \text{ mg}}$$

Station 5

Solve the following problems:

1. You have 3.66 L of sulfur dioxide gas at STP. What mass is this?

2. How many molecules of chromium (III) sulfate are in 50.0 g?

$$\textcircled{1} \quad \frac{3.66 \text{ L SO}_2}{22.4 \text{ L}} \times \frac{1 \text{ mol}}{1 \text{ mol}} \times \frac{64.07 \text{ g}}{1 \text{ mol}} = \boxed{10.5 \text{ g}}$$

$$\textcircled{2} \quad \frac{50.0 \text{ g Cr}_2(\text{SO}_4)_3}{392.21 \text{ g}} \times \frac{1 \text{ mol}}{1 \text{ mol}} \times \frac{6.022 \times 10^{23} \text{ molec}}{1 \text{ mol}} = \boxed{7.68 \times 10^{22} \text{ molec}}$$