

Group 1

3.6 moles → form. u

$$1. \frac{3.6 \text{ moles KCl}}{1} \left| \frac{6.02 \times 10^{23} \text{ form. units KCl}}{1 \text{ mol KCl}} \right. =$$

$$2.2 \times 10^{24} \text{ form. u. KCl}$$

$$2. \frac{.051 \text{ moles CO}_2}{1} \left| \frac{44.01 \text{ g CO}_2}{1 \text{ mole CO}_2} \right. = 2.2 \text{ g CO}_2$$

Group 2

$$1. \frac{56.86 \text{ g Si}}{1} \left| \frac{1 \text{ mol Si}}{28.09 \text{ g Si}} \right| \frac{6.02 \times 10^{23} \text{ atoms Si}}{1 \text{ mol Si}} =$$

$$1.22 \times 10^{24} \text{ atoms Si}$$

$$2. \frac{5.7 \times 10^{13} \text{ molecules H}_2\text{O}}{1} \left| \frac{1 \text{ mole H}_2\text{O}}{6.02 \times 10^{23} \text{ molecules H}_2\text{O}} \right| \frac{18.02 \text{ g H}_2\text{O}}{1 \text{ mole H}_2\text{O}} =$$

$$1.7 \times 10^{-9} \text{ g H}_2\text{O}$$

Group 3

$$1. \frac{2.6 \text{ g O}_2}{1} \left| \frac{1 \text{ mol O}_2}{32.00 \text{ g O}_2} \right| \frac{6.02 \times 10^{23} \text{ molecules O}_2}{1 \text{ mole O}_2} \left| \frac{2 \text{ atoms O}}{1 \text{ molecule O}_2} \right. =$$

$$9.8 \times 10^{22} \text{ atoms O}$$

$$2. \frac{1 \text{ molecule P}_2\text{O}_5}{1} \left| \frac{1 \text{ mol P}_2\text{O}_5}{6.02 \times 10^{23} \text{ molecules P}_2\text{O}_5} \right| \frac{141.94 \text{ g P}_2\text{O}_5}{1 \text{ mole P}_2\text{O}_5} =$$

$$2.36 \times 10^{-22} \text{ g P}_2\text{O}_5$$

Group 1

#4

$$\frac{6.2 \text{ g NaF}}{1} \Bigg| \frac{1 \text{ mol NaF}}{41.99 \text{ g NaF}} = .15 \text{ mol NaF}$$

$$\begin{array}{r} \text{Na } 22.99 \\ \text{F } 19.00 \\ \hline 41.99 \text{ g} \end{array}$$

Group 2

#4

$$\frac{6.8 \times 10^{24} \text{ form. u. NaCl}}{1} \Bigg| \frac{1 \text{ mol NaCl}}{58.44 \text{ g NaCl}} \Bigg| \frac{58.44 \text{ g NaCl}}{1 \text{ mol NaCl}}$$

$$\begin{array}{r} \text{Na } 22.99 \\ \text{Cl } 35.45 \\ \hline 58.44 \text{ g} \end{array}$$

$$\rightarrow = 660 \text{ g NaCl}$$
$$\downarrow 660.119$$
$$6.6 \times 10^2 \text{ g NaCl}$$