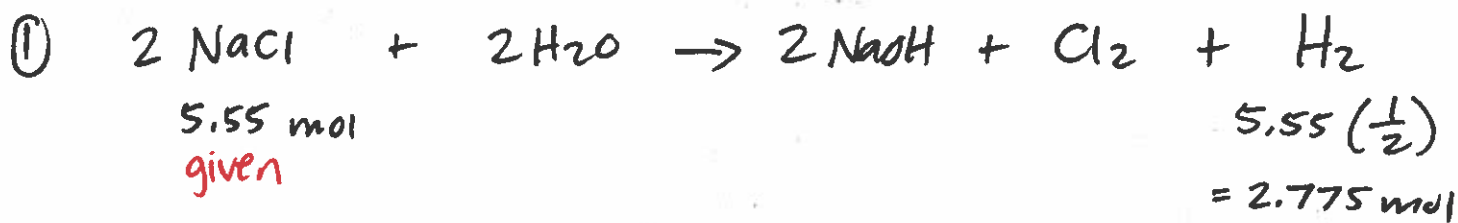


Warm-up



OR

3 sig figs

$$\boxed{2.78 \text{ mol H}_2}$$

$$\frac{5.55 \text{ mol NaCl} \left| \begin{array}{l} \text{given} \\ 1 \text{ mol H}_2 \end{array} \right.}{2 \text{ mol NaCl}} = 2.775 = \boxed{2.78 \text{ mol H}_2}$$

② $\frac{23 \text{ g Cl}_2 \left| \begin{array}{l} \text{given} \\ 1 \text{ mol Cl}_2 \end{array} \right.}{70.9 \text{ g Cl}_2} = 0.3244 \text{ mol Cl}_2$



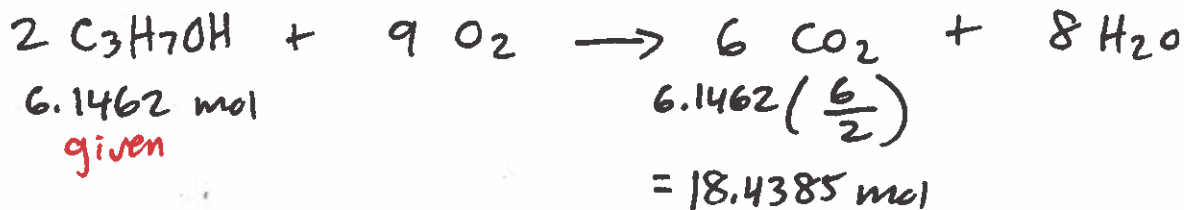
$$\frac{0.6488 \text{ mol NaCl} \left| \begin{array}{l} 58.44 \text{ g NaCl} \\ 1 \text{ mol NaCl} \end{array} \right.}{1 \text{ mol NaCl}} = \boxed{37.9 \text{ g NaCl}}$$

3 sig figs

OR

$$\frac{23 \text{ g Cl}_2 \left| \begin{array}{l} \text{given} \\ 1 \text{ mol Cl}_2 \end{array} \right. \left| \begin{array}{l} 2 \text{ mol NaCl} \\ 1 \text{ mol Cl}_2 \end{array} \right. \left| \begin{array}{l} 58.44 \text{ g NaCl} \\ 1 \text{ mol NaCl} \end{array} \right.}{70.9 \text{ g Cl}_2 \left| \begin{array}{l} 1 \text{ mol Cl}_2 \\ 1 \text{ mol NaCl} \end{array} \right.}{1 \text{ mol NaCl}} = \boxed{37.9 \text{ g NaCl}}$$

$$\textcircled{3} \quad \frac{3.7 \times 10^{24} \text{ molecules } C_3H_7OH}{6.02 \times 10^{23} \text{ molecules } C_3H_7OH} \bigg| \frac{1 \text{ mol } C_3H_7OH}{1 \text{ mol } C_3H_7OH} = 6.1462 \times 10$$



$$\frac{18.4385 \text{ mol } CO_2}{1 \text{ mol } CO_2} \bigg| \frac{22.4 \text{ L } CO_2}{1 \text{ mol } CO_2} = 413 = \boxed{410 \text{ L } CO_2}$$

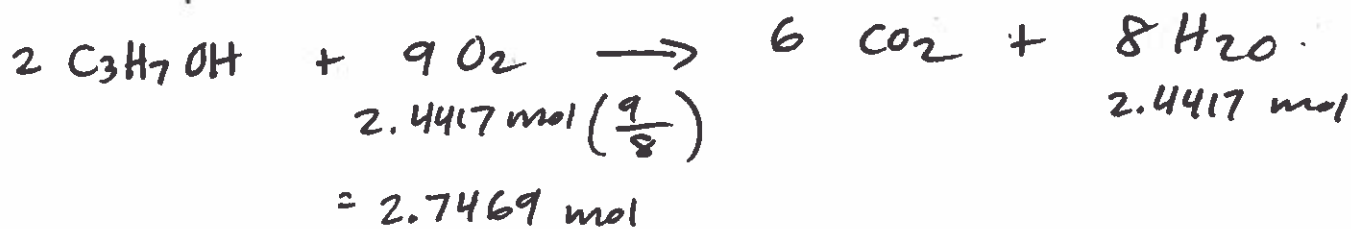
2 sig figs

OR

3.7×10^{24} molecules C_3H_7OH	$1 \text{ mol } C_3H_7OH$	$6 \text{ mol } CO_2$	$22.4 \text{ L } CO_2$
	6.02×10^{23} molecules C_3H_7OH	$2 \text{ mol } C_3H_7OH$	$1 \text{ mol } CO_2$

$$= 413 = \boxed{410 \text{ L } CO_2}$$

$$\textcircled{4} \quad \frac{44 \text{ g } H_2O}{18.02 \text{ g } H_2O} \bigg| \frac{1 \text{ mol } H_2O}{1 \text{ mol } H_2O} = 2.4417 \text{ mol } H_2O$$



$$\frac{2.7469 \text{ mol } O_2}{1 \text{ mol } O_2} \bigg| \frac{6.02 \times 10^{23} \text{ molecules } O_2}{1 \text{ mol } O_2} = 1.65366 \times 10^{24}$$

$$= \boxed{1.7 \times 10^{24} \text{ molecules } O_2}$$

2 sig figs

$44 \text{ g } H_2O$	$1 \text{ mol } H_2O$	$9 \text{ mol } O_2$	6.02×10^{23} molecules O_2	1.7×10^{24} molecules O_2
	$18.02 \text{ g } H_2O$	$8 \text{ mol } H_2O$	$1 \text{ mol } O_2$	