## Amount, Mass and Molar Mass WS

1. Determine the molar mass of each of the following substances:
(a) $\mathrm{MgI}_{2}(\mathrm{~s})$
(b) $\mathrm{Al}(\mathrm{OH})_{3}(\mathrm{~s})$
(c) $\left(\mathrm{NH}_{4}\right)_{2} \mathrm{CO}_{3}(\mathrm{~s})$
(d) $\mathrm{CoCl}_{2}(\mathrm{~s})$
2. Convert each of the following masses into its chemical amount:
(a) 8.40 g of $\mathrm{NaOH}(\mathrm{s})$
(b) 4.2 kg of $\mathrm{H}_{2} \mathrm{O}(\mathrm{l})$
3. Convert each of the following amounts into a mass in grams of the given substance:
(a) 0.456 mol of $\mathrm{Al}_{2}\left(\mathrm{SO}_{4}\right)_{3}(\mathrm{~s})$
(b) 18.0 mol of $\mathrm{CuSO}_{4}$ (s)
4. Complete the following table.

Table 1 Molar Calculations

| Substance | Molar mass (g/mol) | Mass (g) | Chemical amount (mol) |
| :---: | :--- | :--- | :---: |
| $\mathrm{CaCl}_{2}(\mathrm{~s})$ |  | 18.6 |  |
| $\mathrm{Al}_{2} \mathrm{O}_{3}(\mathrm{~s})$ |  |  | 0.267 |
| $\mathrm{Mg}(\mathrm{OH})_{2}(\mathrm{~s})$ |  | 35.00 |  |
| $\mathrm{Na}_{2} \mathrm{CO}_{3}(\mathrm{~s})$ |  |  | 0.150 |

