## Reacting masses - answers

1. A chemical reaction was carried out to convert 1.27 g of copper oxide to copper metal using hydrogen gas. Calculate the mass of copper formed.
$\mathrm{CuO}+\mathrm{H}_{2} \mathrm{Cu}+\mathrm{H}_{2} \mathrm{O}$
1.06 g
2. A student burned 1.68 g of magnesium in air. Calculate the mass of magnesium oxide formed.
$2 \mathrm{Mg}+\mathrm{O} 2 \quad 2 \mathrm{MgO}$

## $\underline{2.78 g}$

3. Sodium hydrogen carbonate decomposes when heated. If 4.88 g of sodium carbonate is formed calculate the mass of sodium hydrogen carbonate that was heated.
$2 \mathrm{NaHCO} 3 \mathrm{Na} 2 \mathrm{CO} 3+\mathrm{CO} 2+\mathrm{H} 2 \mathrm{O}$

### 7.73g

4. Calculate the mass of iron(III) chloride formed when 2.36 g of iron is burned in chlorine gas.
$2 \mathrm{Fe}+3 \mathrm{Cl} 2 \quad 2 \mathrm{FeCl} 3$

### 6.85 g

5. A mixture of 5.74 g iron and 2.28 g sulfur reacted completely to form iron(II) sulphide. The iron was in excess.
$\mathrm{Fe}+\mathrm{S} \quad \mathrm{FeS}$
a. Calculate the mass of iron(II) sulphide that was formed.
6.27 g
b. Calculate the mass of iron left over at the end of the reaction.
