

1. For each reaction, write:

- (i) A chemical equation
- (ii) An ionic equation
- (iii) A balanced net ionic equation

(a) copper(III) iodide solution + mercury bromide solution

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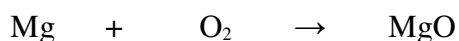
(b) ammonium carbonate solution + aluminium sulphate solution

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2. Consider a reaction in which 13.5 g of Mg reacted with excess O<sub>2</sub>, according to the reaction below:



(a) Balance the equation above.

(b) Calculate the number of moles of Mg that reacted.

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(c) Hence calculate the moles of O<sub>2</sub> that reacted.

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(d) Hence calculate the mass of O<sub>2</sub> that reacted.

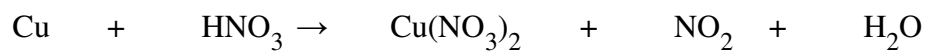
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## BONUS QUESTION

Calculate the mass of  $\text{NO}_2$  produced when excess Cu reacts with 50 mL of 2.0 mol/L  $\text{HNO}_3$ .



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