

**Marks**  
**4**

- If 50 mL of a 0.10 M solution of  $\text{AgNO}_3$  is mixed with 50 mL of a 0.40 M solution of  $\text{Na}_2\text{CO}_3$ , what mass of  $\text{Ag}_2\text{CO}_3$  will precipitate from the reaction?

Answer:

What is the final concentration of  $\text{CO}_3^{2-}$  ions in the solution after the above reaction?

Answer:

- Give balanced ionic equations for the reactions that occur in each of the following cases.

**3**

Sodium metal is added to excess water.

Solutions of cobalt(II) nitrate and sodium phosphate are mixed.

Solid calcium carbonate is dissolved in dilute nitric acid.