

**Marks**  
**2**

- The solubility of  $\text{BaF}_2$  in water is  $1.30 \text{ g L}^{-1}$ . Calculate the solubility product for  $\text{BaF}_2$ .

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|         |
| Answer: |

**3**

- A mixture of  $\text{NaCl}$  (5.0 g) and  $\text{AgNO}_3$  (5.0 g) was added to 1.0 L of water. What are the concentrations of  $\text{Ag}^+(\text{aq})$ ,  $\text{Cl}^-(\text{aq})$  and  $\text{Na}^+(\text{aq})$  ions in solution after equilibrium has been established?  $K_{\text{sp}}(\text{AgCl}) = 1.8 \times 10^{-10}$ .

|                              |                              |                              |
|------------------------------|------------------------------|------------------------------|
|                              |                              |                              |
| $[\text{Ag}^+(\text{aq})] =$ | $[\text{Cl}^-(\text{aq})] =$ | $[\text{Na}^+(\text{aq})] =$ |