

10 Group 2 – Part 2 —Answers

Answers

Work through these after trying the questions yourself.

10.1 Breaking a compound apart by heating it.

10.2 $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$.

10.3 Thermal stability increases down the group; the metal ion gets larger, so it pulls (distorts) the carbonate ion less, making it harder to break apart, so a higher temperature is needed.

10.4 (a) the hydroxides become more soluble \ (b) the sulfates become less soluble.

10.5 Barium hydroxide.

10.6 Magnesium carbonate. The Mg^{2+} ion is small, so it distorts the carbonate ion strongly, weakening it so it breaks apart at a lower temperature. The large Ba^{2+} ion distorts it far less, so barium carbonate is more stable and needs a higher temperature.