• Devise a synthesis of the following compounds from the starting materials indicated. Note that more than one step will be required. Indicate all necessary reagents and the constitutional formulas of any intermediate compounds.

Marks 6

$$\begin{array}{c|c} OH & OH \\ \hline & H_2 / \text{Pd catalyst} \end{array} \begin{array}{c} OH \\ \hline & Cr_2O_7^{2\Theta} / H^{\oplus} \end{array}$$

OH
$$\frac{1. \text{ CH}_3 \text{MgBr}}{2. \text{ H}^{\oplus}/\text{H}_2 \text{O}}$$

$$\frac{\text{conc. H}_2 \text{SO}_4}{\text{conc. H}_2 \text{SO}_4}$$