2 **(a) (i)** Show that $\frac{1}{3-2\sqrt{x}}+\frac{1}{3+2\sqrt{x}}$ can be written in the form $\frac{a}{b+cx}$, where a, b and c are constants to be determined. **[2]**

(ii) Hence solve the equation $\frac{1}{3-2\sqrt{x}}+\frac{1}{3+2\sqrt{x}}=2$. **[2]**

(b) In this question you must show detailed reasoning.

Solve the equation $2^{2y}-7\times 2^{y}-8=0$. **[4]**