

**5** (a) The graph of  $y = 2^x$  can be transformed to the graph of  $y = 2^{x+4}$  **either** by a translation **or** by a stretch.

(i) Give full details of the translation. [2]

(ii) Give full details of the stretch. [2]

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

Solve the equation  $\log_2(8x) = 1 - \log_2(1 - x)$ . [4]