

5.

**In this question you must show all stages of your working.  
Solutions relying on calculator technology are not acceptable.**

(i) Solve the equation

$$3(x - 2\sqrt{5}) = x\sqrt{5}$$

giving your answer in simplest form.

**(3)**

(ii) Find the exact value of  $x$  for which

$$e^{4x-1} = 5e^{\frac{1}{2}x}$$

**(3)**