1 **(a)** Write $19-12x-3x^2$ in the form $a(x+b)^2+c$ where a, b and c are integers. [4]

(b) Hence find the maximum value of $19-12x-3x^2$ and the value of x at which this maximum occurs. [2]

(c) Use your answer to **part (a)** to solve the equation $19-12\sqrt{u}-3u=0$. [3]