

$$2^{2x+1} - 9 \cdot 2^x + 4 < 0$$

$$\text{Pongo: } 2^x = t \quad \Rightarrow \quad 2t^2 - 9t + 4 < 0 \quad \Rightarrow \quad t_{1,2} = \frac{9 \pm \sqrt{81 - 32}}{4} = \left\langle \begin{array}{l} 4 \\ \frac{1}{2} \end{array} \right. \Rightarrow$$

$$\frac{1}{2} < t < 4 \quad \Rightarrow \quad -1 < x < 2$$