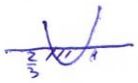
1.3
1

$3 \cdot 4^x + 2 \cdot 9^x < 5 \cdot 6^x \quad / : 3^{2x}$

$3 \cdot \left(\frac{2}{3}\right)^{2x} + 2 < 5 \cdot \left(\frac{2}{3}\right)^x$

$A = \left(\frac{2}{3}\right)^x \quad (A > 0)$

$3A^2 - 5A + 2 < 0$



$\frac{2}{3} < \left(\frac{2}{3}\right)^x < 1$

$\left(\frac{2}{3}\right)^1 < \left(\frac{2}{3}\right)^x < \left(\frac{2}{3}\right)^0$

$\boxed{0 < x < 1}$