6

$$6 \cdot 9^x - 13 \cdot 6^x + 6 \cdot 4^x = 0 \qquad (: 4^x)$$

$$6\left(\frac{9}{4}\right)^x - 13 \cdot \left(\frac{3}{2}\right)^x + 6 = 0$$

$$y = \left(\frac{3}{2}\right)^x; \Rightarrow$$

$$6 \cdot y^2 - 13y + 6 = 0$$

$$D = 169 - 4 \cdot 6 \cdot 6 = 25$$

$$y_{1,2} = \frac{13 \pm 5}{12}; \quad y_1 = \frac{3}{2};$$

$$y_2 = \frac{2}{3};$$

$$y_1 = \frac{3}{2} = \left(\frac{3}{2}\right)^x \Rightarrow \underline{x_1 = 1}$$

$$y_2 = \frac{2}{3} = \left(\frac{3}{2}\right)^x \Rightarrow \underline{x_2 = -1}$$