1261. Rešiti jednačinu $\log_3 x \cdot \log_9 x \cdot \log_{27} x \cdot \log_{81} x = \frac{2}{3}$

$$\log_3 x \cdot \log_9 x \cdot \log_{27} x \cdot \log_{81} x = \frac{2}{3}$$

Kako je: $\log_{b^s} a = \frac{1}{s}\log_a b$

$$\log_3 x \cdot \log_{3^2} x \cdot \log_{3^3} x \cdot \log_{3^4} x = \frac{2}{3}$$

$$\log_3 x \cdot \frac{1}{2}\log_3 x \cdot \frac{1}{3}\log_3 x \cdot \frac{1}{4}\log_3 x = \frac{2}{3}$$

$$\frac{1}{24}\log_3 x \cdot \log_3 x \cdot \log_3 x \cdot \log_3 x = \frac{2}{3}$$

$$\frac{1}{24}(\log_3 x)^4 = \frac{2}{3}$$

$$(\log_3 x)^4 = 16$$

$\log_3 x = -2$ $\qquad$ $\log_3 x = 2$

$x_1 = \frac{1}{9}$ $\qquad$ $x_2 = 9$