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P7

$$\log_{\sin x} \sin x \cdot \log_{\sin x} \sin x \cdot \log_{\sin x} \sin x = \frac{1}{4}$$

הצבה

$$0 < \sin x \neq 1$$

הצבה

$$\frac{\pi}{2} < x < \frac{3\pi}{2}, \quad 0 < x < \frac{\pi}{2}$$

הצבה

$$\frac{3\pi}{2} < x < 2\pi, \quad 0 < x < \frac{\pi}{2}$$

הצבה

$$0 < \sin x$$

$$0 < x < \frac{\pi}{2}$$

$$\boxed{2\pi k + 0 < x < \frac{\pi}{2} + 2\pi k} \quad \text{כאן}$$

$$\frac{1}{\log_{\sin x} \sin x} \cdot \frac{1}{\log_{\sin x} \sin x} = \frac{1}{4}$$

$$\frac{1}{\log_{\sin x} \sin x + \log_{\sin x} \sin x} \cdot \frac{1}{\log_{\sin x} \sin x + \log_{\sin x} \sin x} = \frac{1}{4}$$

$$\frac{1}{1 + \log_{\sin x} \sin x} \cdot \frac{1}{\log_{\sin x} \sin x + 1} = \frac{1}{4}$$

$$\frac{1}{4} = \frac{1}{1+A} \cdot \frac{1}{\frac{1}{A} + 1} = \frac{1}{1+A} \cdot \frac{A}{1+A}$$

$$(A+A)^2 = 4A \rightarrow A^2 - 2A + 1 = 0$$

$$(A-1)^2 = 0$$

~~הצבה~~

$$A=1 \rightarrow$$

$$\log_{\sin x} \sin x = 1$$

$$\sin x = \sin x$$

$$\boxed{x = \frac{\pi}{2} + 2\pi k}$$

הצבה

$$\log_{\sin x} \sin x = A \quad \text{כאן}$$