

Calculate:

$$\frac{(6^{-1} - \sqrt{3}^{-4}) : (0,5^{-2} + \sqrt[3]{-8^{-1}})}{\log_8 0,5 \cdot \log_{32} 2 - 1\frac{2}{3} : (-2\frac{1}{2})} =$$

$$\frac{\left(\frac{1}{6} - \frac{1}{9}\right) : \left(4 - \frac{1}{2}\right)}{-\frac{1}{3} \cdot \frac{1}{5} - \frac{5}{3} : \left(-\frac{5}{2}\right)} =$$

$$\frac{\frac{1}{18} : \frac{7}{2}}{-\frac{1}{15} - \frac{5}{3} \cdot \left(-\frac{2}{5}\right)} =$$

$$\frac{\frac{1}{18} \cdot \frac{2}{7}}{-\frac{1}{15} + \frac{2}{3}} = \frac{\frac{1}{63}}{\frac{9}{15}} =$$

$$\frac{1}{63} : \frac{9}{15} = \frac{1}{63} \cdot \frac{15}{9} = \frac{5}{189}$$

$$6^{-1} = \frac{1}{6}$$

$$\sqrt{3}^{-4} = \left(\frac{1}{\sqrt{3}}\right)^4 = \frac{1}{9}$$

$$0,5^{-2} = \left(\frac{1}{2}\right)^{-2} = 2^2 = 4$$

$$\sqrt[3]{-8^{-1}} = \sqrt[3]{-\frac{1}{8}} = \left(-\frac{1}{8}\right)^{\frac{1}{3}} = -\frac{1}{2}$$

$$\log_8 0,5 = \log_8 \frac{1}{2} = -\frac{1}{3} \rightarrow 8^{-\frac{1}{3}} = \frac{1}{2}$$

$$\log_{32} 2 = \frac{1}{5} \rightarrow 32^{\frac{1}{5}} = 2$$

note that $2^5 = 32$

$$\frac{1}{6} - \frac{1}{9} = \frac{3}{18} - \frac{2}{18} = \frac{1}{18}$$

$$4 - \frac{1}{2} = 3\frac{1}{2} = \frac{7}{2}$$

$$-\frac{1}{15} + \frac{2}{3} = -\frac{1}{15} + \frac{10}{15} = \frac{9}{15}$$

Is that clear?