Calculate:

$$\frac{64^{\frac{2}{3}} \cdot \sqrt{8}}{0{,}5^{-4} \cdot \sqrt[4]{4}} - \log_4^2 32 - \frac{1}{2}\sin\frac{7\pi}{6} =$$

$$\frac{32\sqrt{2}}{\left(\frac{1}{2}\right)^{-4} \cdot 4^{\frac{1}{4}}} - \left(\log_4 2^5\right)^2 - \frac{1}{2}\sin 210° =$$

$$\frac{32\sqrt{2}}{2^4 \cdot (2^2)^{\frac{1}{4}}} - \left(5\log_4 2\right)^2 - \frac{1}{2}\sin 210° =$$

$$\frac{32\sqrt{2}}{16 \cdot 2^{\frac{1}{2}}} - \left(5 \cdot \frac{1}{2}\right)^2 - \frac{1}{2}\sin 210° =$$

$$\frac{32\sqrt{2}}{16\sqrt{2}} - \left(\frac{5}{2}\right)^2 - \frac{1}{2} \cdot \left(-\frac{1}{2}\right) =$$

$$2 - \frac{25}{4} + \frac{1}{4} = -\frac{17}{4} + \frac{1}{4} = -\frac{16}{4} = -4$$

Is that clear?

$64^{\frac{2}{3}} = (64^{\frac{1}{3}})^2 = 4^2 = 16$

$\sqrt{8} = 2\sqrt{2}$

$16 \cdot 2\sqrt{2} = 32\sqrt{2}$

$32 = 2^5$

$\log_4^2 32 = (\log_4 32)^2$

$\log_4 2 = \frac{1}{2} \rightarrow 4^{\frac{1}{2}} = 2$

$\log_a x^p = p \cdot \log_a x$

$\pi = 180°$

$\frac{7}{6} \cdot 180° = 210°$

$\sin 210° = \sin(180° + 30°) =$

$= -\sin 30° = -\frac{1}{2}$