

$$\begin{aligned}
 \log_{2\sqrt{2}} 8 - \log_{\frac{1}{2}} 0.25 &= \log_{\frac{3}{2^2}} 2^3 - \log_{\frac{1}{2}} \frac{1}{4} = 3 \log_{\frac{3}{2^2}} 2 - \log_{\frac{1}{2}} \left(\frac{1}{2}\right)^2 = 3 * \frac{1}{\log_2 2^{\frac{3}{2}}} - 2 \log_{\frac{1}{2}} \frac{1}{2} \\
 &= \frac{3}{\frac{3}{2} \log_2 2} - 2 = \frac{3}{\frac{3}{2}} - 2 = 2 - 2 = 0
 \end{aligned}$$

A 0 jest liczba wymierna.