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Dane:

$\Lambda_1 = 40\text{dB} = 4\text{B}$

$\Lambda_2 = 90\text{dB} = 9\text{B}$

Szukane:

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = ?$

Rozwiązanie:

$\Lambda = \log\left(\frac{\mathrm{I}}{\mathrm{I}_0}\right)$

$10^{\Lambda} = \frac{\mathrm{I}}{\mathrm{I}_0}$

$I = \ \mathrm{I}_0 10^{\Lambda}$

$\mathrm{I}_1 = \ \mathrm{I}_0 10^{\Lambda_1}$

$\mathrm{I}_2 = \ \mathrm{I}_0 10^{\Lambda_2}$

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = \frac{\mathrm{I}_0 10^{\Lambda_2}}{\mathrm{I}_0 10^{\Lambda_1}}$

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = \frac{10^{\Lambda_2}}{10^{\Lambda_1}}$

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = \frac{10^9}{10^4}$

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = 10^5$

$\frac{\mathrm{I}_2}{\mathrm{I}_1} = 100000$

Natężenie wzrosło 100000 razy.