RADICACIÓN

Problema 56:

Simplifica:

$$[\frac{2^n \cdot (2^{n-1})^n}{2^{n+1} \cdot 2^{n-1}} \cdot \frac{1}{4^{-n}}]^{1/n^2}$$

Solución Problema 56:

$$[\frac{2^n \cdot (2^{n-1})^n}{2^{n+1} \cdot 2^{n-1}} \cdot \frac{1}{4^{-n}}]^{1/n^2} = [\frac{2^n \cdot 2^{n^2-n}}{2^n \cdot 2 \cdot 2^n \cdot 2^{-1}} \cdot \frac{1}{(2^2)^{-n}}]^{1/n^2} =$$

$$= [\frac{\cancel{2^n} \cdot 2^{n^2} \cdot 2^{-n}}{\cancel{2^n} \cdot \cancel{2} \cdot 2^n \cdot \frac{1}{\cancel{2}}} \cdot \frac{1}{(2^2)^{-n}}]^{1/n^2} = [\frac{2^{n^2} \cdot}{2^n \cdot 2^n} \cdot \frac{1}{2^{-2n}}]^{1/n^2} = [\frac{2^{n^2} \cdot \cancel{2^{2n}}}{\cancel{2^{2n}}}]^{1/n^2} =$$

$$= [2^{n^2}]^{1/n^2} = \sqrt[2n]{2^{n^2}} = 2$$

Luego,

$$[\frac{2^n \cdot (2^{n-1})^n}{2^{n+1} \cdot 2^{n-1}} \cdot \frac{1}{4^{-n}}]^{1/n^2} = 2$$