



Estudiante: _____ 8° _____

Aplique las propiedades y resuelva hasta que la expresión sea irreducible.

Ejemplos:

$$\sqrt[4]{81} = \sqrt[4]{3^4} = \pm 3^{\frac{4}{4}} = \pm 3$$

$$\sqrt[3]{0.000008} = \sqrt[3]{(0.02)^3} = (0.02)^{\frac{3}{3}} = (0.02)$$

Para calcular los decimales que tiene la respuesta contamos la cantidad de los decimales que tiene la cantidad subradical y lo dividimos entre el índice de esa raíz, esa es la cantidad de decimales que tendrá la respuesta.

$$\sqrt[5]{\sqrt[4]{8}} = \sqrt{\sqrt{\sqrt{\sqrt{8}}}}$$

$$\sqrt[4]{\frac{81}{16}} = \frac{\sqrt{\sqrt{81}}}{\sqrt{\sqrt{16}}} = \frac{\sqrt{9}}{\sqrt{4}} = \pm \frac{3}{2}$$

$$\sqrt[3]{-8 \times 216 \times 27}$$

$$= \sqrt[\square]{\square} \times \sqrt[\square]{\square} \times \sqrt[\square]{\square}$$

$$= \sqrt[\square]{\square \square} \times \sqrt[\square]{\square \square} \times \sqrt[\square]{\square \square}$$

$$= \square^{\frac{\square}{\square}} \times \square^{\frac{\square}{\square}} \times \square^{\frac{\square}{\square}}$$

$$= \square \times \square \times \square = \square$$

$$\sqrt[4]{-625} = \square$$

$$\sqrt[5]{\frac{32}{243}} = \frac{\sqrt[\square]{\square}}{\sqrt[\square]{\square}} = \frac{\sqrt[\square]{\square \square}}{\sqrt[\square]{\square \square}} = \frac{\square}{\square}$$

$$\sqrt[3]{0.000001} = \sqrt[\square]{\square \square} = \square^{\frac{\square}{\square}} = \square$$

$$\sqrt[6]{\frac{e^{18}}{2^{12}}} = \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}} = \pm \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}} = \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}$$

$$\sqrt[2]{3\sqrt[3]{\frac{1}{64}}} = \sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}} = \frac{\sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}}}{\sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}}} = \pm \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}$$

$$\sqrt[8]{\left(\frac{1}{5}\right)^{24}} = \left(\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}\right)^{\frac{\quad}{\quad}} = \left(\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}\right)^{\quad} = \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}$$

$$\sqrt[4]{\frac{27}{4}} \times \sqrt[4]{\frac{3}{4}} = \sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}} \times \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}} = \sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}} \times \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}$$

$$\sqrt[\quad]{\frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\frac{\quad}{\quad}}} = \pm \frac{\sqrt[\quad]{\frac{\quad}{\quad}}}{\sqrt[\quad]{\frac{\quad}{\quad}}}$$

$$\sqrt[2]{\frac{25}{36} \times \frac{49}{81}} = \sqrt{\frac{\square}{\square}} \times \sqrt{\frac{\square}{\square}}$$

$$= \frac{\sqrt{\frac{\square}{\square}}}{\sqrt{\frac{\square}{\square}} \times \frac{\square}{\square}} \times \frac{\sqrt{\frac{\square}{\square}}}{\sqrt{\frac{\square}{\square}}}$$

$$= \frac{\sqrt{\frac{\square}{\square}}}{\sqrt{\frac{\square}{\square}} \times \sqrt{\frac{\square}{\square}}} \times \frac{\sqrt{\frac{\square}{\square}}}{\sqrt{\frac{\square}{\square}}}$$

$$= \pm \frac{\frac{\square}{\square}}{\frac{\square}{\square} \times \frac{\square}{\square} \times \frac{\square}{\square}} \times \frac{\frac{\square}{\square}}{\frac{\square}{\square}}$$

$$= \pm \frac{\frac{\square}{\square} \times \frac{\square}{\square}}{\frac{\square}{\square} \times \frac{\square}{\square} \times \frac{\square}{\square}} = \pm \frac{\frac{\square}{\square}}{\frac{\square}{\square}}$$