n. 194

$$\sqrt[4]{\frac{4x^2+4y^2}{a^4}}$$ C.E. $a \neq 0$

$$\frac{4x^2+4y^2}{a^4} \geq 0$$ $N \geq 0$ sempre

$D > 0$ $a \neq 0$

$$\sqrt[4]{\frac{4(x^2+y^2)}{a^4}} = \sqrt[4]{\frac{2^2(x^2+y^2)}{a^4}}$$ irr.

$$\sqrt[8]{\frac{a^4(a-4)^4}{a^2+4a+4}} = \underline{\sqrt[8]{\frac{a^4(a-4)^4}{(a+2)^2}}} =$$

C.E. $a \neq -2$

$$= \sqrt[4]{\frac{a^2(a-4)^2}{|a+2|}}$$

$$\sqrt{\frac{(x^3+4x^2)^2}{(x^2-16)^3}} = \frac{(x^3+4x^2)}{x^2-16}\sqrt{\frac{1}{x^2-16}} =$$

$$= \frac{x^2\cancel{(x+4)}}{\cancel{(x+4)}(x-4)}\sqrt{\frac{1}{x^2-16}} =$$

$$= \frac{x^2}{x-4}\sqrt{\frac{1}{x^2-16}} =$$

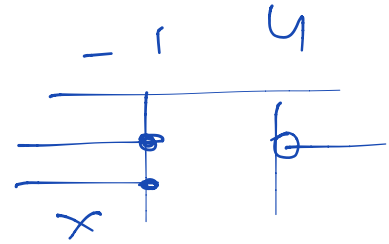
$$= \frac{x^2}{x-4}\cdot\frac{\sqrt{1}}{\sqrt{x^2-16}} =$$

$$= \frac{x^2}{x-4}\cdot\frac{1}{\sqrt{x^2-16}}$$

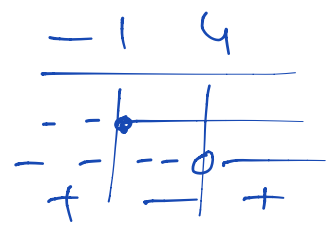
$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

$$\sqrt{\frac{x+1}{x-4}} : \sqrt{\frac{x+1}{-x^2}}$$

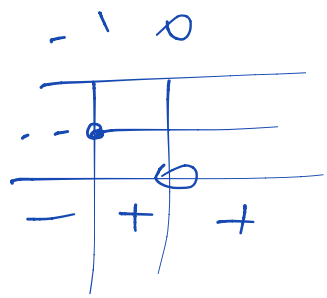
$$\begin{cases} \dfrac{x+1}{x-4} \geq 0 \\[2ex] \dfrac{x+1}{-x^2} \geq 0 \end{cases} \qquad \begin{cases} x \leq -1 \vee x > 4 \\[2ex] x \leq -1 \end{cases}$$



I) $\dfrac{x+1}{x-4} \geq 0$ $\quad N \geq 0 \;\; x \geq -1$ $\quad D > 0 \;\; x > 4$



II) $\dfrac{x+1}{x^2} \leq 0$ $\quad N \geq 0 \;\; x \geq -1$ $\quad D > 0 \;\; \forall x \neq 0$



$$\sqrt{\frac{\cancel{x+1}}{x-4} \cdot \frac{-x^2}{\cancel{x+1}}} = \sqrt{\frac{-x^2}{x-4}}$$

Somma di radici

$4\sqrt{2}$ $\qquad$ $3\sqrt{2}$

x $\qquad$ $3x$

$$\sqrt{2} + 3\sqrt{2} = 4\sqrt{2}$$

$\sqrt{3} + \sqrt{2}$ = non si sommano

$x + y$ $\longrightarrow$ $\cancel{\sqrt{3+2}}$

$$\cancel{\sqrt{x^2+y^2} = x+y}$$

$$2\sqrt{8} + 4\sqrt{32} =$$

$$= 2\sqrt{2^3} + 4\sqrt{2^5} = 4\sqrt{2} + 16\sqrt{2} =$$

$$= 20\sqrt{2}$$