

Limites

$$\lim_{x \rightarrow 4}$$

$$\frac{\sqrt{x} - 2}{x - 4}$$

$$= \ll \frac{0}{0} \gg \quad \text{IND.}$$

$$= \ll \frac{\sqrt{4} - 2}{4 - 4} \gg$$

$$= \ll \frac{2 - 2}{4 - 4} \gg$$

MÉTHODE DU CONJUGUÉ

$$\frac{A}{A} = 1$$

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

$$\frac{x}{y} \cdot \frac{z}{t} = \frac{xz}{yt}$$

$$= \frac{(\sqrt{x} - 2)}{(x - 4)} \cdot \frac{(\sqrt{x} + 2)}{(\sqrt{x} + 2)}$$

Conjugué de $\sqrt{x} - 2$

$$\frac{(\sqrt{x} + 2)}{(\sqrt{x} + 2)}$$

$$(A+B)(A-B) = A^2 - B^2$$

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

$$= \frac{1}{\sqrt{x}+2}$$

$$\lim_{x \rightarrow 4} \frac{\sqrt{x}-2}{x-4} = \lim_{x \rightarrow 4} \frac{1}{\sqrt{x}+2} = \ll \frac{1}{\sqrt{4}+2} \gg$$
$$= \left(\frac{1}{4} \right)$$