

ET15

$$k) \lim_{x \rightarrow \infty} \frac{\sqrt[3]{x+8}}{\sqrt{x+1}} \cdot \frac{\sqrt[3]{|x+8|^2}}{\sqrt[3]{x+8|^2}}$$

$$= \lim_{x \rightarrow \infty} \frac{\sqrt[3]{x}}{\sqrt{x}} \cdot \frac{\sqrt[3]{1 + \frac{8}{x}}}{\sqrt{1 + \frac{1}{x}}}$$

✓
~~⊗~~

$y = \sqrt{x}$

$x = y^2$

$$\frac{\sqrt[3]{y^2}}{y}$$

$$\lim_{y \rightarrow \infty} \frac{\sqrt[3]{y^2}}{y}$$

$$= \lim_{y \rightarrow +\infty} y^{2/3} \cdot y^{-1}$$

$$= \lim_{y \rightarrow +\infty} y^{-1/3} = \lim_{y \rightarrow +\infty} \frac{1}{\sqrt[3]{y}} = 0$$

* $\leadsto 0 \cdot \infty = 0$

$$\frac{\sqrt[3]{x}}{\sqrt{x}}$$

$$x^{1/3} \cdot x^{-1/2}$$

=

$$x^{1/3 - 1/2}$$

=

$$x^{-1/6}$$

=

$$x^{-1/6}$$

=

$$\frac{1}{\sqrt[6]{x}}$$

$$1) \lim_{x \rightarrow \infty} \left(x - \sqrt[3]{x^3 + 1} \right)$$

$$\lim_{x \rightarrow \infty} \left(x - \sqrt[3]{x^3} \cdot \sqrt[3]{1 + \frac{1}{x^3}} \right)$$

$$\lim_{x \rightarrow \infty} \left(x \cdot \left(1 - \sqrt[3]{1 + \frac{1}{x^3}} \right) \right)$$

?

$(k - a)$

$(a \overline{a} b) \cdot (\text{---})$

$\mathcal{U}^3 \overline{a} b^3$

$$\frac{(x - a) \cdot (x^2 + x \cdot a + a^2)}{(x^2 + x \cdot a + a^2)}$$



$$\frac{x^3 - a^3}{x^2 + x \cdot a + a^2}$$

$$\underline{x^3 - (x^3 + 1)}$$

$$x^2 + x\sqrt[3]{x^3+1} + \sqrt[3]{x^3+1}^2$$

— 1

$x \rightarrow \infty \rightarrow +\infty$

lim e'

Zero

$$g(x) = x$$

$$h(x) = 1/x$$

defino

$$\tilde{f}(x) = \begin{cases} g(x) \cdot h(x) & \text{se } x \neq 0 \end{cases}$$

$$\left[\begin{array}{l} \underline{1} \\ \text{se } x=0 \end{array} \right]$$

$G_{\text{eff}}(f)$



