



$$3) c) \lim_{x \rightarrow 1} \frac{\sqrt{x^2+4x-1} - \sqrt{3x+1}}{\sqrt{x+8} - 3} = \lim_{x \rightarrow 1} \frac{x^2+4x-1 - (3x+1)}{\sqrt{x^2+4x-1} + \sqrt{3x+1}} = \frac{x+8-3^2}{\sqrt{x+8}+3}$$

$$= \lim_{x \rightarrow 1} \frac{x^2+4x-1-3x-1}{\sqrt{x^2+4x-1} + \sqrt{3x+1}} = \frac{x+8-9}{\sqrt{x+8}+3}$$

$$= \lim_{x \rightarrow 1} \frac{x^2+x-2}{\sqrt{x^2+4x-1} + \sqrt{3x+1}} \cdot \frac{\sqrt{x+8}+3}{x-1} =$$

$$= \lim_{x \rightarrow 1} \frac{(x-1)(x+2)}{\sqrt{x^2+4x-1} + \sqrt{3x+1}} \cdot \frac{\sqrt{x+8}+3}{(x-1)} = \lim_{x \rightarrow 1} \frac{(x+2)(\sqrt{x+8}+3)}{\sqrt{x^2+4x-1} + \sqrt{3x+1}} = \frac{9}{4}$$

REPASITO ☺

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

$$\sqrt{a} - b = \frac{a-b^2}{\sqrt{a} + b}$$

RUFFINI: $\begin{array}{r|rrr} & 1 & 1 & -2 \\ & 1 & 1 & 2 \\ \hline & 1 & 2 & 0 \end{array}$

3) d) $\lim_{x \rightarrow 5^+} (x-5) \cdot e^{\frac{1}{x-5}} =$

$\lim_{x \rightarrow 5^+} \frac{e^{\frac{1}{x-5}}}{\frac{1}{x-5}} = +\infty$ POR ORDENES

HAY QUE APLICAR ORDENES.

AYUDA: $1) \frac{3}{\frac{1}{7}} = 3 \cdot \frac{7}{1} = 21$

$$\frac{a}{\frac{1}{b}} = a \cdot \frac{b}{1}$$

ENTONCES $(x-5) \cdot h = \frac{h}{x-5}$