

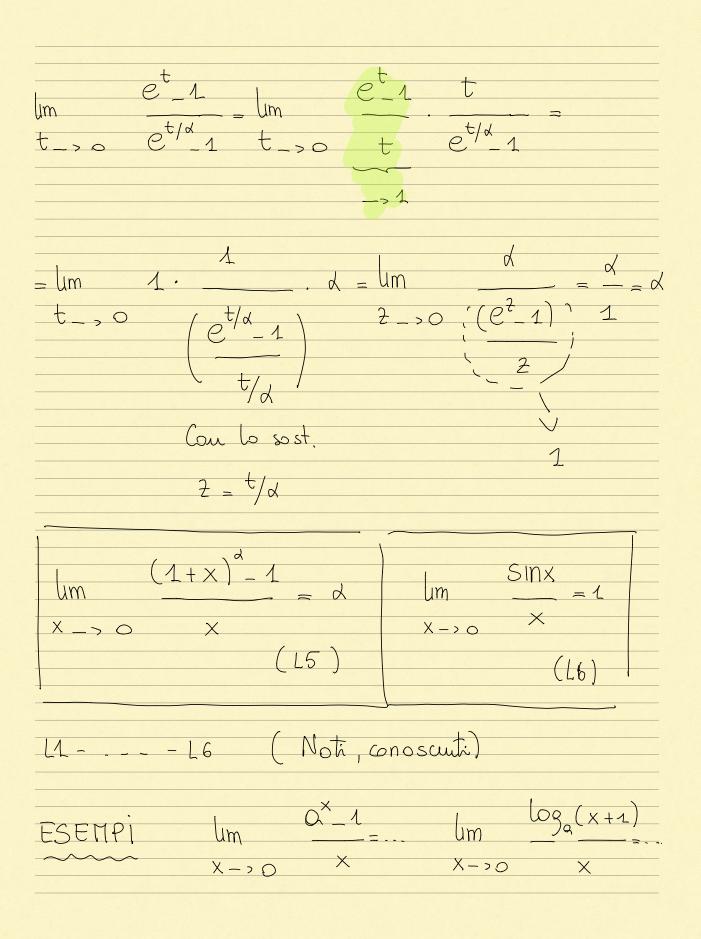
$$\lim_{S \to \infty} \left[\frac{1 + \frac{1}{5}}{5} \right]^{\frac{1}{5}} = e^{\frac{1}{5}}$$

ESEMPLO LIMITE NOTEVOLE

$$\lim_{X\to\infty} \frac{\ln(1+x)}{\ln(1+x)} = 0$$

$$= \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{S} \right] = \lim_{S \to +\infty} \left[\left(1 + \frac{1}{S} \right)^{$$

$$\lim_{X \to \infty} \frac{\ln(1+x)}{x} = 1$$



ESERC. Colcob lunti

$$\lim_{X \to -1} \frac{\frac{1}{3}}{x + 1} = \lim_{X \to -1} \frac{\frac{1}{3}}{(x^{1/3} + 1)(x^{2/3} + 1)} = \lim_{X \to -1} \frac{(x^{1/3} + 1)(x^{2/3} + 1)}{(x^{1/3} + 1)(x^{2/3} + 1)}$$

$$(a^3 + b^3) = (a + b)(a^2 + ab + b^2) = \frac{1}{3}$$

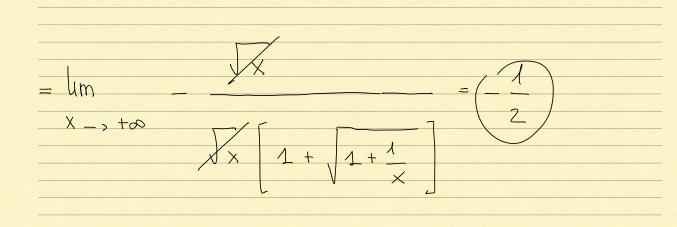
$$(x+1) = (x^{1/3} + 1)(x^{2/3} + 1)$$

ES
$$(x+1)_{-2}\sqrt{x}$$
 $(x+1)_{+2}\sqrt{x}$ $(x+1)_{+2}\sqrt{x}$ $(x+1)_{+2}\sqrt{x}$

$$\lim_{X \to 1} \frac{\left(x+1\right)^2 - \left(2\sqrt{x}\right)^2}{\left(x+1\right)^2 \cdot \left[\left(x+1\right) + 2\sqrt{x}\right]}$$

$$\lim_{X \to 1} \frac{x^2 + 1 + 2x - 1}{\left(x + 1\right) + 2\sqrt{x}} = \frac{1}{4}$$

Es
$$\frac{1}{3}$$
 $\frac{1}{2}$ \frac



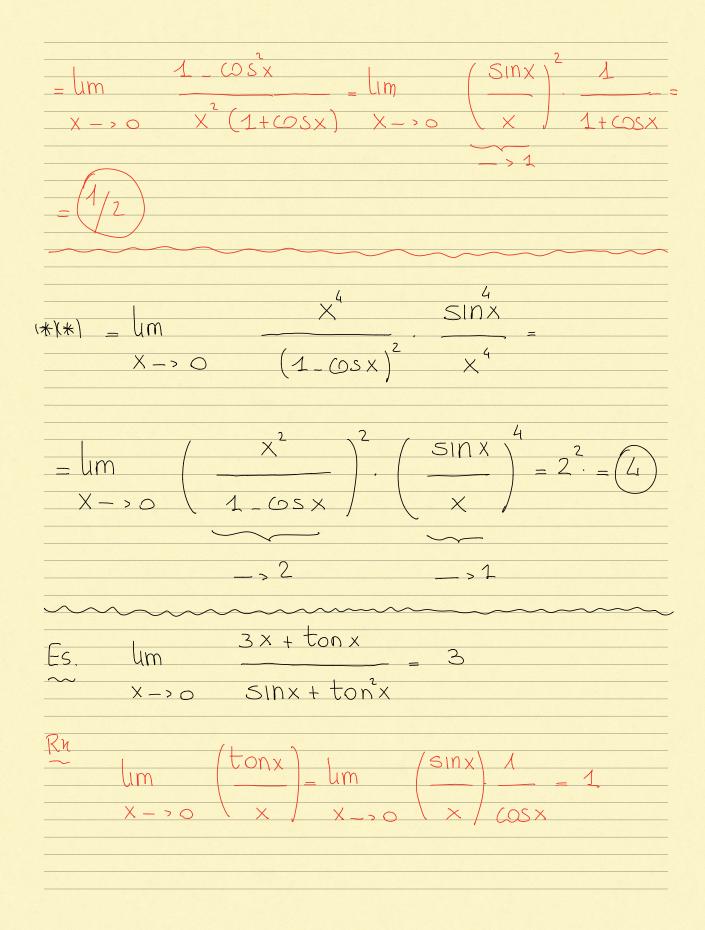
Es
$$\frac{3-x^{4}}{x^{2}} = \frac{1}{2} = \frac{x^{4}}{x^{2}} = \frac{t^{2}}{x^{2}} = \frac{x^{4}}{t^{2}} = \frac{x^{4}}{t^{2$$

$$= \lim_{t \to 3} \left(\frac{3-t}{9-t^2} \right) = \lim_{t \to 3} \left(\frac{3-t}{3+t} \right) = \frac{1}{6}$$

$$\frac{ES}{\sim} \qquad \qquad \frac{SIN^4x}{\left(1 - \cos x\right)^2} = (**)$$

Rh

$$\frac{1 - \cos x}{1 - \cos x} = \lim_{x \to \infty} \frac{(1 - \cos x)(1 + \cos x)}{x} = \lim_{x \to \infty} \frac{(1 - \cos x)(1 + \cos x)}{x}$$



$$\lim_{X \to \infty} \frac{x \left(3 + \frac{\tan x}{x}\right)}{x} = \frac{3}{3} = 3$$

$$x \to \infty \qquad x \left(\frac{\sin x}{x} + \frac{\tan x}{x} \cdot \tan x\right) \qquad 1$$

$$\lim_{X \to \infty} \frac{x \left(\frac{\sin x}{x} + \frac{\tan x}{x} \cdot \tan x\right)}{1} = \frac{1}{2}$$

$$\lim_{X \to \infty} |x| \log \left(\frac{x^2 + x + 1}{x^2 + 2}\right) = \frac{1}{2}$$

$$\lim_{X \to \infty} |x| \log \left(\frac{1 + \frac{x - 1}{x^2 + 2}}{x^2 + 2}\right) = \frac{1}{2}$$

$$\lim_{X \to \infty} |x| \log \left(\frac{1 + \frac{x - 1}{x^2 + 2}}{x^2 + 2}\right) = \frac{1}{2}$$

$$\lim_{X \to \infty} |x| = \frac{1}{2}$$

$$\lim_{X$$

Devo risolvere

$$\lim_{t \to +\infty} \frac{t + \int_{-4}^{2} (2+t)}{2t}$$

$$t + \int_{-2}^{2} 4(2+t) ds = \int_{-2}^{2} ds ds = \int_{$$

$$\frac{1}{4} \frac{1}{4} \frac{1}$$

$$\lim_{X-,\pm\infty} |x| \log \left(1 + \frac{X-1}{2}\right) =$$

$$= \lim_{X \to \infty} |x| \cdot \left(\frac{x^2 + 2}{x - 1}\right) \cdot \left(\frac{x - 1}{x^2 + 2}\right) \log\left(1 + \frac{x - 1}{x^2 + 2}\right) =$$

