IL CONDIZIONAMENTO È DATO DALLA FORMULA:

$$Cf = \frac{x(f'(x))}{f(x)}$$

$$f(x) = \frac{2}{4x-1} + \frac{4}{x+2}$$

$$f'(x) = \frac{0\cdot(4x-1) - 2(4)}{(4x-1)^2} + \frac{0\cdot(x+2) - 4(1)}{(x+2)^2} =$$

$$= -\frac{8}{(4x-1)^2} - \frac{4}{(x+2)^2} = -\frac{8(x+2)^2 - 4(4x-1)^2}{(4x-1)^2\cdot(x+2)^2} =$$

$$= \frac{-8(x^2-4x+4) - 4(16x^2-8x+1)}{(4x-1)^2\cdot(x+2)^2} =$$

$$= \frac{-8x^2-32x-32-64x^2+32x-4}{(4x^2+8x-x-2)^2} = \frac{-72x^2+36}{(4x^2+7x-2)^2}$$

$$cf = x \cdot \left(\frac{-72x^2 + 36}{(4x^2 + 7x - 2)^2} \right) = \frac{}{\frac{2}{4x-1} + \frac{4}{x+2}}$$

$$= \frac{x \cdot (-72x^2 + 36)}{\frac{2(x+2) + 4(4x-1)}{(4x-1)\cdot(x+2)}} \Longrightarrow$$

$$= \frac{x(-72x^2 + 36)}{(4x^2 + 7x - 2)^2} \cdot \frac{(4x-1)\cdot(x+2)}{18x} \Longrightarrow$$

$$\frac{(-72x^2 + 36)\cdot(4x-1)\cdot(x+2)}{18(4x^2 + 7x - 2)^2} \Longrightarrow \boxed{\frac{-4x^2 + 2}{4x^2 + 7x - 2}}$$

[HO SALTATO PASSAGGI DI CALCOLO]

IL PICCOLI VALORI DI x $\rightarrow \lim_{x \to 0}$, QUINDI

$$\lim_{x \to 0} \frac{-4x^2 + 2}{4x^2 + 7x - 2} = -\frac{2}{2} = -1$$

PROBLEMA BEN CONDIZIONATO

B1

φ_1: $\frac{3x-2}{3x+2}$ $\quad \{_{B1} = \left\{ \frac{\varphi_1}{\varphi_1 - \varphi_2} \right\} \{\varphi_1 + \left\{ \frac{-\varphi_2}{\varphi_1 - \varphi_2} \right\}$

φ_2: $\frac{x-3}{x+3}$ $\quad \{\varphi_2 + \{\gamma_1$

$\gamma_1 := \varphi_1 - \varphi_2$