

$$\lim_{x \rightarrow \infty} \frac{2x + \sin 2x + 1}{(2x + \sin 2x)(\sin x + 3)^2}$$

$$\frac{2x + \sin 2x + 1}{(2x + \sin 2x)(\sin x + 3)^2} = \frac{2x}{2x} \frac{1 + \overset{\rightarrow 0}{\frac{\sin 2x}{2x}} + \overset{\rightarrow 0}{\frac{1}{2x}}}{\left(1 + \overset{\rightarrow 0}{\frac{\sin 2x}{2x}}\right) \left(\overset{\rightarrow N.E.}{\sin x + 3}\right)^2} \rightarrow N.E.$$

IL LIMITE NON ESISTE INFATTI:

$$\begin{cases} x_m = 2\pi m + \frac{\pi}{2} \rightarrow +\infty & m \rightarrow +\infty & (\sin x_m + 3)^2 \rightarrow 16 \\ x_m = 2\pi m - \frac{\pi}{2} \rightarrow +\infty & m \rightarrow +\infty & (\sin x_m + 3)^2 \rightarrow 4 \end{cases}$$