

LJP : Limites – Serie 4

Limites CORRIGE'

3M

Limite	CEP	CLP	CLE
$\lim_{x \rightarrow -\infty} xe^x = [-\infty \cdot 0^+] = 0^-$	X		
$\lim_{x \rightarrow +\infty} x \log x = [+\infty \cdot (+\infty)] = +\infty$			
$\lim_{x \rightarrow +\infty} xe^x = [+\infty \cdot (+\infty)] = +\infty$			
$\lim_{x \rightarrow 0^+} (\ln x)(e^x) = [-\infty \cdot (1^+)] = -\infty$			
$\lim_{x \rightarrow -\infty} -xe^{-(5+2x)} = [+\infty \cdot (+\infty)] = +\infty$			
$\lim_{x \rightarrow 0^+} 16^x \log_{\frac{1}{4}}(x+4) = 1^+ \cdot \log_{\frac{1}{4}}(4^+) = 1^+ \cdot (-1^-) = -1^-$			
$\lim_{x \rightarrow -\infty} \log_{0.2}(5-2x) \cdot 10^x = [-\infty \cdot (0^+)] = 0^-$			X
$\lim_{x \rightarrow -\infty} (\log_{0.2}(5-2x) + 10^x) = [-\infty + (0^+)] = -\infty$			
$\lim_{x \rightarrow 0^+} (x^{200} - x) \cdot 23^x = [0^- \cdot 1^+] = 0^-$			
$\lim_{x \rightarrow +\infty} x^3 \cdot 3^x = [+\infty \cdot (+\infty)] = +\infty$			
$\lim_{x \rightarrow -\infty} x^3 \cdot 3^x = [-\infty \cdot (0^+)] = 0^-$	X		
$\lim_{x \rightarrow 8} x^8 \cdot 3^{(x-8)} = 8^8 \cdot 3^0 = 8^8$			
$\lim_{t \rightarrow +\infty} (4-t) \cdot (0.1)^{t-2} = [-\infty \cdot 0^+] = 0^-$	X		

$\lim_{h \rightarrow -2} (0.1)^{h+2} + \log(2+h)^4 = [1 + (-\infty)] = -\infty$			
$\lim_{y \rightarrow 5} (625)^{y^2-25} \cdot \log(5-y)^{54} = [1 \cdot (-\infty)] = -\infty$			
$\lim_{y \rightarrow 1^+} \log_y 10 = \lim_{y \rightarrow 1^+} \log 10 / \log y = [1/0^+] = +\infty$			
$\lim_{x \rightarrow 0^+} x^7 \cdot \log_x x = [0^+ \cdot 1] = 0^+$			
$\lim_{x \rightarrow 0^+} (1/x)^7 \cdot \log_7 x = [+\infty \cdot (-\infty)] = -\infty$			
$\lim_{x \rightarrow 0^+} (1/x)^7 \cdot \log_x 7 = \lim_{x \rightarrow 0^+} \frac{1}{x^7} \cdot \frac{\log 7}{\log x} = \lim_{x \rightarrow 0^+} \frac{\log 7}{x^7 \log x} = \left[\frac{\log 7}{0^+(-\infty)} \right] \Rightarrow \left[\frac{\log 7}{0^-} \right] = -\infty$		X	
$\lim_{x \rightarrow 0^-} (1-x)^{300} \cdot \log_{(3-x)} 3 = [1^+ \cdot 1^-] = 1^-$			
$\lim_{x \rightarrow \infty} (x-20)^{66} \cdot 2^{x^2} = [+\infty \cdot (+\infty)] = +\infty$			
$\lim_{x \rightarrow \infty} (100+x)^{660} / 11^{x^{22}} = [+\infty / (+\infty)] = 0^+$	X		