

Weekly test VI

Monday, 10th November 2014

Ex. 1 Find, if they exist, horizontal and vertical asymptotes of the following function:

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

Ex. 2 Determine if the following function is continuous on \mathbb{R} :

$$f(x) = \begin{cases} \frac{e^x - 1}{x} - 1 & \text{if } x \in (-\infty, 0) \\ \frac{\ln(1+x)}{x^2 + 1} & \text{if } x \in [0, 1] \\ x^2 - 1 & \text{if } x \in (1, +\infty) \end{cases}$$