

(Q1 continued)(c) Find $\lim_{x \rightarrow -1} f(x)$.

Show your work:

(d) Is there a value of b that makes the function f continuous at $x = -1$? If yes, then provide the value.

Explain your answer:

QUESTION 2. Does the limit $\lim_{x \rightarrow -\infty} e^{1/x}$ exist? If so, what is its value?

Answer:

Justify your answer (two lines could be enough) without using sequences of numerical values for x .

Answer:

QUESTION 3. Let f be the function given by $f(x) = \frac{1}{x^2 + 3}$. Use the definition of the derivative to compute $f'(2)$. Show all your work.