

(الف) $\lim_{x \rightarrow 0} \frac{x^2 - 1}{x^2 - 4} \Rightarrow \begin{cases} x^+ \rightarrow \frac{0}{0} = \text{مستندار} \\ x^- \rightarrow \frac{0}{0} = \text{مستندار} \end{cases}$

(1)

(ب) $\lim_{x \rightarrow \pi} \frac{|\sin x|}{\sin x} \Rightarrow \begin{cases} x^+ \rightarrow \frac{1}{-1} = -\frac{1}{1} \\ x^- \rightarrow \frac{1}{1} = \frac{1}{1} \end{cases} \Rightarrow \text{مستندار}$

(الف) $\lim_{x \rightarrow \frac{\pi}{2}} \cos x \Rightarrow \begin{cases} x^+ \rightarrow \sqrt{0} = 0 \\ x^- \rightarrow \sqrt{0} = 0 \end{cases} \Rightarrow \text{مستندار}$

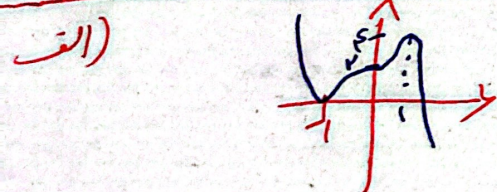
(1)

(ب) $\lim_{x \rightarrow 0} \sqrt{x - \sqrt{x}} \Rightarrow \begin{cases} x^+ \rightarrow 0 \\ x^- \rightarrow 0 \end{cases}$

(الف) $\lim_{n \rightarrow \infty} \frac{(-1)^{[n/2]}}{n^2 - n^2} \Rightarrow \frac{(-1)^0}{0} = -\infty$

(9)

(ب) $\frac{n^2 - [n^2]}{n - [n]} \Rightarrow \begin{cases} x^+ = 1 \\ x^- = 0 \end{cases}$



$\lim_{n \rightarrow \infty} \frac{n^2 - n^2}{n^2 - n^2} \Rightarrow \lim_{n \rightarrow \infty} \frac{0}{0} = \frac{-1}{1} = -1$

(1)

(ب) $n^2 - [n^2] \Rightarrow f_n^2 - f_n \Rightarrow f_n(n^2 - 1) \Rightarrow 0, \infty$

$\frac{-1}{0} = -\infty$

