

تکلیف شماره ۱۸

پروفسور نبی زاده، دوازدهم تجربی ب

۱۹، ۵ آزمون به سبب

(۱) الف $\lim_{n \rightarrow 2^-} \frac{2n+5}{n+1} = \frac{9}{3} = 3$ ب $\lim_{n \rightarrow 2^+} \frac{2n+5}{n+1} = \frac{9}{3} = 3$ ج $\lim_{n \rightarrow 2} \frac{2n+5}{n+1} = \frac{9}{3} = 3$ د $\lim_{n \rightarrow 2} \frac{2n+5}{n+1} = \frac{9}{3} = 3$

$\lim_{n \rightarrow 0} \frac{2n+5}{[n^2]}$ $\begin{cases} 0^+ \rightarrow \frac{5}{0} = +\infty \\ 0^- \rightarrow \frac{5}{0} = -\infty \end{cases}$ $\lim_{n \rightarrow 2} \frac{2n+5}{n+1} = \frac{9}{3} = 3$

$\lim_{n \rightarrow 2^-} \epsilon [n] - 2 = \epsilon(2) - 2 = 4$ الف

$\lim_{n \rightarrow 2^-} [\epsilon n - 2] = [1.5] = 1$ ب

$[\lim_{n \rightarrow 2^-} \epsilon n - 2] = [1.5] = 1$ ج

$[\lim_{n \rightarrow 2^+} \epsilon n - 2] = [1.5] = 1$ د

$\lim_{n \rightarrow 2^-} \frac{2[n] + 1}{2} = \frac{2(2) + 1}{2} = \frac{5}{2}$ الف

$\lim_{n \rightarrow 2^-} [\frac{2n+1}{2}] = [1.5] = 1$ ب

$[\lim_{n \rightarrow 2^-} \frac{2n+1}{2}] = [1.5] = 1$ ج

$[\lim_{n \rightarrow 2^+} \frac{2n+1}{2}] = [1.5] = 1$ د

$\lim_{n \rightarrow 1} \frac{n-5}{(n-1)(n-8)} = \frac{1}{n-1}$ $\begin{cases} 1^+ \rightarrow \frac{1}{0^+} = +\infty \\ 1^- \rightarrow \frac{1}{0^-} = -\infty \end{cases}$ الف حد ندارد

$\lim_{n \rightarrow 2} \frac{n-5}{(n-2)^2} = \frac{-1}{0^+} = -\infty$ ب حد ندارد

Date: _____

$$\lim_{n \rightarrow -r} [-r^n] - [rn] \begin{cases} n \rightarrow -r^+ \rightarrow 1 - (-10) = 11 \\ n \rightarrow -r^- \rightarrow 9 - (-14) = 23 \end{cases}$$

الف (8)

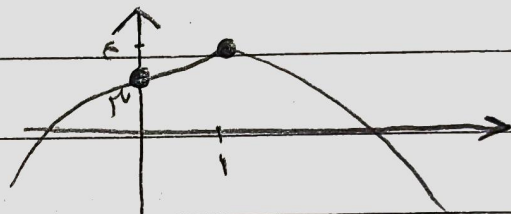
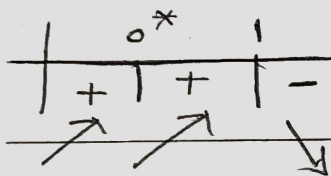
$$n < -\frac{1}{r} \rightarrow n^r < \frac{1}{14} \rightarrow \frac{1}{n^r} > 14$$

ب (1,8)

$$\Rightarrow \frac{-1}{n^r} < -14 \quad \lim_{n \rightarrow (-\frac{1}{r})^-} \left[\frac{-1}{n^r} \right] = -14$$

$$f = \varepsilon n^r - r n^r + r \quad f' = 1r n^r - 1r n^r \quad (4)$$

$$1r n^r (1 - n)$$



$$\lim_{n \rightarrow 1} [\varepsilon n^r - r n^r + r] = [\varepsilon^-] = r$$

الف

$$\lim_{n \rightarrow 0} [\varepsilon n^r - r n^r + r] \begin{cases} n \rightarrow 0^+ \rightarrow [r^+] = r \\ n \rightarrow 0^- \rightarrow [r^-] = r \end{cases}$$

ب (2)

$$\lim_{n \rightarrow r} \frac{|n^r - 1|}{n^r - \varepsilon} \begin{cases} n \rightarrow r^+ \rightarrow \frac{(n-r)(n^r + rn + \varepsilon)}{(n-r)(n+r)} = r \\ n \rightarrow r^- \rightarrow -\frac{(n-r)(n^r + rn + \varepsilon)}{(n-r)(n+r)} = -r \end{cases} \quad (V)$$

ب (2)

$$\lim_{n \rightarrow \pi} \frac{|\sin n|}{\sin rn} \begin{cases} n \rightarrow \pi^+ \rightarrow \frac{-\sin n}{r \sin n \cos n} = \frac{-1}{-r} = \frac{1}{r} \\ n \rightarrow \pi^- \rightarrow \frac{\sin n}{r \sin n \cos n} = \frac{1}{-r} = -\frac{1}{r} \end{cases}$$

ب (2)

SARV

Journal

٥ الف

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حد حوالہ نڈار

(9) الو -

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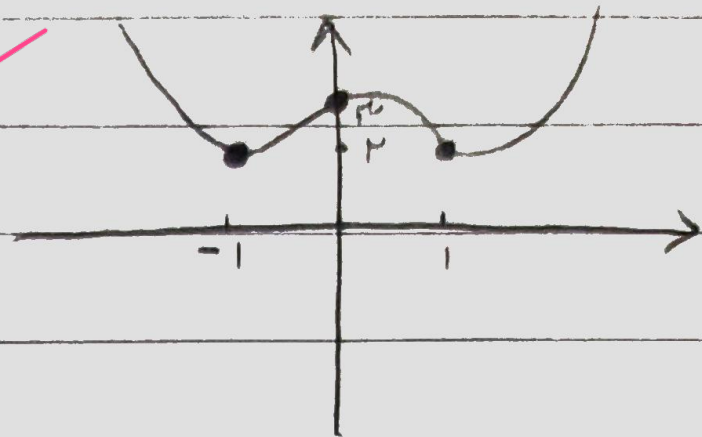
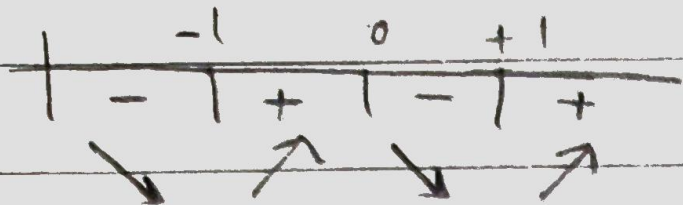
ص ۱ الف

2

تعارف

$$y' = \varepsilon x^p - \varepsilon x = \varepsilon x (x^p - 1)$$

1.



$$(-1, \varepsilon) \quad (0, \varepsilon)$$

$$(1, \varepsilon)$$

$$\text{ب) } x < -\frac{1}{4} \rightarrow x^k > \frac{1}{14} \rightarrow -x^k < -\frac{1}{14} \rightarrow -\frac{1}{x^k} > -14$$

$$\lim_{x \rightarrow -\frac{1}{4}^-} \left[-\frac{1}{x^k} \right] = -14$$

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