

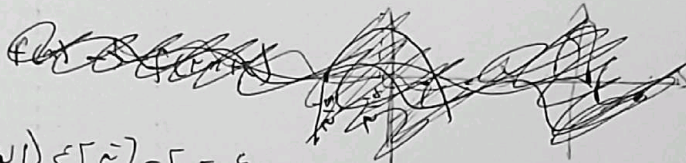
الف) $\frac{2(x)+5}{x+1} = 3$

ب) $\frac{2(x)+5}{x+1} = 4$

ج) $\frac{2(x)+5}{x+1} = 5$

د) $\frac{2(x)+5}{x+1} = \frac{7}{0} = \infty$

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الف) $f(2) - 2 = 6$

ب) $[f(2) - 2] = 9$

ج) $\lim_{x \rightarrow 2} f(x) = 10$

د) $\lim_{x \rightarrow 2} f(x) - 2 = 10$

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الف) $\frac{3[x^2]+1}{x} = \frac{7}{5}$

ب) $\left[\frac{3x^2+1}{x} \right] = 4$

ج) $\lim_{x \rightarrow 5} \frac{3(x^2)+1}{x} = 5$

د) $\frac{3(x^2)+1}{x} = 5$

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الف) $\lim_{x \rightarrow 1} \frac{x-5}{(x-5)(x-1)} = \frac{1}{x-1} \begin{cases} \xrightarrow{+} +\infty \\ \xrightarrow{-} -\infty \end{cases}$

ب) $\lim_{x \rightarrow 5} \frac{x-5}{(x-5)^2} \begin{cases} \xrightarrow{+} -\infty \\ \xrightarrow{-} -\infty \end{cases}$

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الف) $[-f(-2)] - [f(-2)] \begin{cases} \xrightarrow{-2^+} 1 - (-4) = 5 \\ \xrightarrow{-2^-} 10 - (-16) = 26 \end{cases}$

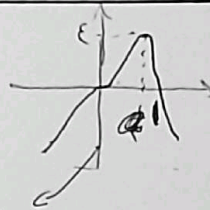
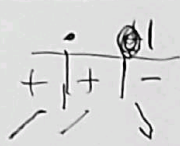
ب) $\lim_{x \rightarrow (-1)^+} \left[\frac{-1}{x^2} \right] \rightarrow \left[-1(1)^+ \right] = -1$

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الف) $|x^r - 1| = |x^r(1 - x^{-r})|$

$1^+ \rightarrow [x^r] = 1$

$1^- \rightarrow [x^r] = 1$



$1^+ \rightarrow [x^r] = 1$

ب) $|x^r - 1| = |x^r(1 - x^{-r})|$

$1^- \rightarrow [x^r] = 1$

الف) $r^+ \rightarrow \frac{x^r - 1}{x^r - 1} = \frac{1}{1} = 1$

$r^- \rightarrow \frac{-x^r + 1}{x^r - 1} = \frac{-1}{1} = -1$

ب) $r^+ \rightarrow \frac{-\sin x}{\sin x} = \frac{-1}{1} = -1$ $r^- \rightarrow \frac{\sin x}{\sin x} = \frac{1}{1} = 1$

الف) $\frac{r^+}{r} \rightarrow \sqrt{1}$

ب) $1^+ \rightarrow \sqrt{1 - 2\sqrt{1}} \rightarrow 0$

$1^- \rightarrow \sqrt{1 - 2\sqrt{1}} \rightarrow 0$

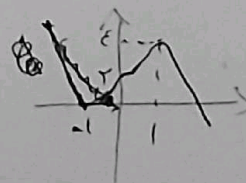
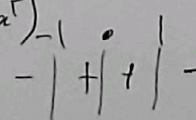
$\frac{r^-}{r} \rightarrow 0 \rightarrow \text{نقطة}$

الف) $\frac{(-1)^r}{x^r - 1} = \frac{1}{1 - 1} = \frac{1}{0} = +\infty$

ب) $r^+ \rightarrow \frac{x^r - 1}{x^r - 1} = \frac{1}{1} = 1$

$r^- \rightarrow \frac{x^r - 1}{x^r - 1} = 1$

الف) $|x^r - 1| = |x^r(1 - x^{-r})|$



ب) $x^r - 1 \rightarrow x^r(1 - x^{-r})$

