

آلایین تئوریم بنام خدا
تکلیف 29

3 $\lim_{x \rightarrow r^+} f(x) = L$ (A) $\lim_{x \rightarrow r^-} f(x) = L$ (B)

4 $f(x) = L + \epsilon$ $\forall \epsilon > 0$ $\exists \delta > 0$ $\forall x \in [r, r + \delta) \implies f(x) \in [L - \epsilon, L + \epsilon]$ (الف)

5 $f(x) = L - \epsilon$ $\forall \epsilon > 0$ $\exists \delta > 0$ $\forall x \in (r - \delta, r] \implies f(x) \in [L - \epsilon, L + \epsilon]$ (ب)

6 $[L - \epsilon, L + \epsilon] \cap [r, r + \delta) \neq \emptyset$ (الف) $\lim_{x \rightarrow r} f(x) = L \implies [L - \epsilon, L + \epsilon] \cap [r, r + \delta) \neq \emptyset$ (ب)

7 $\frac{1}{x} \rightarrow +\infty : x \rightarrow 0^+$ (الف) $\frac{1}{x} \rightarrow +\infty : x \rightarrow 0^+$ (ب)

8 $\frac{1}{x} \rightarrow -\infty : x \rightarrow 0^-$ (الف) $\frac{1}{x} \rightarrow -\infty : x \rightarrow 0^-$ (ب)

9 $\frac{1}{\sqrt{x}} \rightarrow +\infty : x \rightarrow 0^+$ (الف) $\frac{1}{\sqrt{x}} \rightarrow +\infty : x \rightarrow 0^+$ (ب)

10 $\frac{1}{\sqrt{x}} \rightarrow -\infty : x \rightarrow 0^-$ (الف) $\frac{1}{\sqrt{x}} \rightarrow -\infty : x \rightarrow 0^-$ (ب)

11 $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (الف) $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (ب)

12 $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (الف) $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (ب)

13 $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (الف) $\frac{1}{x^2} \rightarrow +\infty : x \rightarrow 0$ (ب)

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$\lim_{x \rightarrow r} [r, x] \cup [-r, x] \Rightarrow$ 1) $x \rightarrow r^+ \leq 9 - \sqrt{x} \leq r$ (الف) 1/3

2) $x \rightarrow r^- \leq 1 - \sqrt{x} \leq r$

lim $\leq r$, انبار صاف و ايل ←

$\lim_{x \rightarrow -c} [-r, x] \cup [r, x] \Rightarrow$ 1) $x \rightarrow r^+ \leq r^2 - 1 \leq 11$ (ب)

2) $x \rightarrow r^- \leq r^2 \leq 11$

lim ≤ 11 , انبار صاف و ايل ←

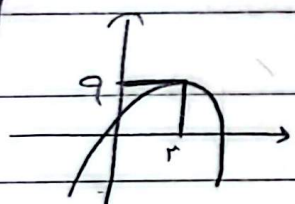
$\lim_{x \rightarrow r} [x^r - r^2] \leq$ 9/3

$\frac{x(x-r)}{0 \cdot r} \Rightarrow$ (مستقيم بازيج) (الف)

$\frac{0}{+ \cdot 0 - 0 \cdot +}$

$r^- \rightarrow r^- - 1 \leq [(-r)^-] \leq [-r^2 \dots 11^0] \leq -r$

$\lim_{x \rightarrow r} [r, x - x^r] \leq$ (ب)



$\lim_{x \rightarrow r} [r, x - x^r] \leq [r^-] \leq 1$

$\lim_{x \rightarrow r} \frac{|x-r|}{x^r - r^2 + r} \Rightarrow \frac{0}{0} \sim \frac{r(x-1)(x-r)}{r^2}$ (الف) 10/3

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

2) $x \rightarrow r^- \rightarrow -1$

$\lim_{x \rightarrow 1} x - [x] \leq 0 \sim$ 1) $x \rightarrow 1^+ [x] \leq [1^+] \leq 1$

$\frac{x-1}{(x-1)(x+1)} \leq \frac{1}{x+1}$

2) $x \rightarrow 1^- \rightarrow [1^-] \leq 0 \leq \frac{1}{2^-} \leq -\infty$

