

۱۰٪ ساری - دوازدهم سپر B

بنا خدا

تلف ساری ۱۸۵

۱۹/۵ آخرین به ساری

(الف - ۱)

$$\lim_{x \rightarrow 1^+} \frac{x^2 + 1}{x - 1} = \frac{2}{0} = \infty \quad \checkmark$$

$$\lim_{x \rightarrow 1^-} \frac{x^2 + 1}{x - 1} = \frac{2}{0} = -\infty \quad \checkmark$$

$$\lim_{x \rightarrow 1} \frac{x^2 + 1}{x - 1} = \frac{2}{0} \quad \checkmark$$

$$\lim_{x \rightarrow 0} \frac{x^2 + 1}{x} \quad \begin{matrix} +0 \rightarrow \text{مخرج صفر} \\ -0 \rightarrow \text{صورت صفر} \end{matrix} \quad \checkmark$$

$$\lim_{x \rightarrow 0} f(x) = 2 = 2 \quad \checkmark$$

$$\lim_{x \rightarrow 0} [f(x) - 2] = [0] = 0 \quad \checkmark$$

$$[\lim_{x \rightarrow 0} f(x) - 2] = 0 \quad \checkmark$$

$$[\lim_{x \rightarrow 0} f(x) - 2] = 0 \quad \checkmark$$

$$\lim_{x \rightarrow 0} \frac{x^2 + 1}{x} = \frac{1}{0} = \infty \quad \checkmark$$

$$\lim_{x \rightarrow 0} \left[\frac{x^2 + 1}{x} \right] = \left[\frac{1}{0} \right] = \infty \quad \checkmark$$

$$[\lim_{x \rightarrow 0} \frac{x^2 + 1}{x}] = \infty \quad \checkmark$$

$$[\lim_{x \rightarrow 0} \frac{x^2 + 1}{x}] = \infty \quad \checkmark$$

(ب)

(ع)

(د)

(۲ - الف)

(ب)

(ع)

(د)

(۳ - الف)

(ب)

(ع)

(د)

$$\lim_{x \rightarrow 1} \frac{x - a}{x^2 - 9x + a} = \frac{a - a}{(a - 9)(a - 1)} \quad \frac{1}{+0-0+} \rightarrow \frac{1}{1-} = -\infty$$

في كل مرة

(الف - ٤)

$$\lim_{x \rightarrow \infty} \frac{x - \infty}{x^2 - 9x + 9} \rightarrow \frac{x - \infty}{(x - \infty)^2} \rightarrow \frac{\infty}{+0+} \quad \mu^+ > \mu^- = -\infty$$

$$\lim_{x \rightarrow -\infty} [x^2 - 9x + 9] \rightarrow -\infty^+ = 1 + 10 = 11 \quad \mu^- = 9 + 19 = 28$$

(الف - ٥)

$$\lim_{x \rightarrow -\frac{1}{r}} \left[\frac{-1}{x^r} \right] \rightarrow x \cdot \frac{1}{r} \Rightarrow \frac{1}{x} > -r \rightarrow \frac{1}{x} < 19 \rightarrow -\frac{1}{x^r} > -19 \rightarrow \left[-19 \right] = -19$$

(الف - ٦)

$$\lim_{x \rightarrow 1} [x^{\mu} - x^{\nu} + x] \quad 1^- \rightarrow [x^{\mu}] = \mu \quad 1^+ \rightarrow [x^{\nu}] = \nu$$

(١, ٧٥)

$$\lim_{x \rightarrow 0} [x^{\mu} - x^{\nu} + x] \quad 0^+ \rightarrow [x^{\mu}] = \mu \quad 0^- \rightarrow [x^{\nu}] = \nu$$

(الف - ٧)

$$\lim_{x \rightarrow \infty} \frac{|x^{\mu} - 1|}{x^{\nu} - \infty} \quad r^+ \rightarrow \frac{1}{x} = \infty \quad r^- \rightarrow -\frac{1}{x} = -\infty$$

$$\lim_{x \rightarrow \infty} \frac{|\sin x|}{\sin x} \quad r^+ \rightarrow \frac{\sin x}{r \sin x \cos x} = \frac{1}{-r} = -\frac{1}{r} \quad r^- \rightarrow \frac{\sin x}{r \sin x \cos x} = \frac{1}{-r} = -\frac{1}{r}$$

(الف - ٨)

$$\lim_{x \rightarrow \frac{\pi}{2}} \sqrt{\cos x} \quad \frac{\pi}{2}^+ \rightarrow \sqrt{0^+} = 0 \quad \frac{\pi}{2}^- \rightarrow \sqrt{0^-} = 0$$

$$\lim_{x \rightarrow 0} \sqrt{x - x\sqrt{x}} \quad 0^+ \rightarrow x\sqrt{x} \rightarrow \sqrt{x} \rightarrow \frac{1}{x} \quad 0^- \rightarrow \sqrt{x^-} \rightarrow \frac{1}{x^-}$$

$$\lim_{x \rightarrow 0^+} \frac{(-1)^{\sin x}}{x^c - x^c} = \frac{(-1)^0}{x^c (x - 1)} = \frac{1}{0^-} = -\infty$$

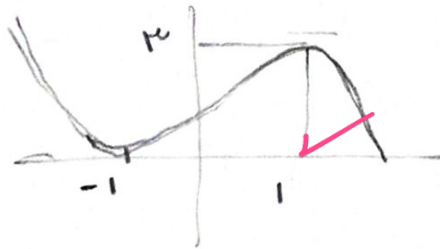
(١, ٧٥)

$$\lim_{x \rightarrow \infty} \frac{x^r - [x^c]}{x - [x]} \quad r^+ \rightarrow \frac{(x - r)(x + r)}{x - r} = x + r = \infty \quad r^- \rightarrow \frac{x^r - \infty}{x - 1} = \frac{x^r - \infty}{x - 1} = 1$$

$$\omega q^{\mu} - \epsilon q^{\omega} + 2 \rightarrow \omega q^{\mu} - \omega q^{\epsilon} \rightarrow \omega q^{\mu} (1 - q^{\epsilon}) \rightarrow 0, \pm 1$$

5, 6, 7, 8, 9, 10
(all -1.)

-1	0	+1
-	+	-



2

$$q^{\epsilon} - 2q^{\mu} + \epsilon \rightarrow \epsilon q^{\mu} - \epsilon q \rightarrow \epsilon q (q^{\mu} - 1) \rightarrow 0, \pm 1$$

-1	0	+1
-	+	-



(-)