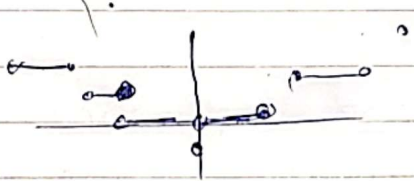


ا. $\frac{2(2)+9}{2+1} = \frac{9}{3} = 3$

ب. $\frac{2(2)+9}{2} = \frac{9}{2} = 4.5$

ج. $\frac{2(2)+9}{2} = \frac{9}{2} = 4.5$

با توجه به اینکه $n=2$ در نقطه $n=2$ است
اینجا رد می شود

د. $\frac{2n+7}{n^2} = \frac{7}{n}$  $\Rightarrow \{n^2\} = c$

ا. $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2} = \lim_{x \rightarrow 2} \frac{(x-2)(x+2)}{x-2} = \lim_{x \rightarrow 2} (x+2) = 4$

ب. $\lim_{x \rightarrow 0} \frac{x^3}{x^2} = \lim_{x \rightarrow 0} x = 0$

ج. $\lim_{x \rightarrow 0} \frac{x^3}{x^2} = \lim_{x \rightarrow 0} x = 0$

ا. $\lim_{x \rightarrow 2} \frac{x^3 + 1}{x^2} = \frac{2^3 + 1}{2^2} = \frac{9}{4} = 2.25$

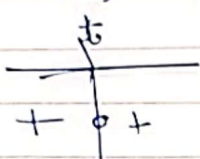
ب. $\lim_{x \rightarrow 2} \frac{x^3 + 1}{x^2} = \frac{9}{4} = 2.25$

ج. $\lim_{x \rightarrow 2} \frac{x^3 + 1}{x^2} = \frac{9}{4} = 2.25$

ا. $\lim_{n \rightarrow \infty} \frac{n-5}{n^2-4n+4} = \lim_{n \rightarrow \infty} \frac{n-5}{(n-2)^2} = \frac{-5}{\infty} = 0$

ب. $\lim_{n \rightarrow \infty} \frac{(n-5)(n-1)}{n^2-4n+4} = \lim_{n \rightarrow \infty} \frac{(n-5)(n-1)}{(n-2)^2} = \frac{-5}{4} = -1.25$

$\lim_{n \rightarrow \infty} \frac{n - \sum_{k=1}^n \frac{1}{k}}{n^2 - 4n + 9} = \frac{-1}{0^+} = -\infty$
 $\lim_{n \rightarrow \infty} \frac{n - \sum_{k=1}^n \frac{1}{k}}{n^2 - 4n + 9} = \frac{-1}{0^+} = -\infty$

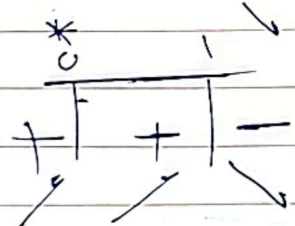


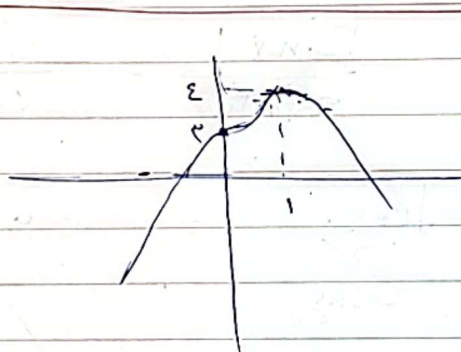
$n) \quad -3^- \rightarrow \left[\frac{-3^-(-3^-)}{+9^+} \right] - \left[\frac{a(-3^-)}{-1a^-} \right] \quad 9 - (-14) = 23$

$-3^+ \rightarrow \left[\frac{-3^+(-3^+)}{+9^-} \right] - \left[\frac{a(-3^+)}{-1a^+} \right] \quad \wedge \quad -1a^+ = 1 - (-14) = 15$

$\Rightarrow \left[\frac{-1}{n\epsilon} \right] - \frac{1}{\frac{1}{14}} \Rightarrow -14^- = \left[-14^+ \right] = \underline{-14}$

$12n^2 - 12n^3$
 $12n^2(1-n)$
 $\epsilon n^3 - 3n^2 + 3 \rightarrow 0 \rightarrow 3$
 $\downarrow \quad \downarrow \quad \downarrow$
 $0 \quad 1 \quad -$





$\Rightarrow$ عبارت درازگی 1
 کمتر دارد به است

$\Rightarrow$ درازگی $0^- = \left[12 \right] = 12$
 درازگی $0^+ = \left[12^+ \right] = 12$

الف) $u > r$ ✓

$$\frac{\frac{u}{1-u-r} (u^2 + ru + \varepsilon)}{(u-r)(u+r)} = \frac{1r}{\varepsilon} = \mu$$

$u < r$

$$\frac{-\frac{1}{1-u-r} (u^2 + ru + \varepsilon)}{(u-r)(u+r)} = -\mu$$

ب) $u > \pi$

$$\frac{|\sin u|}{\sin \pi} = \frac{-\sin u}{\sin u \times \cos u} = \frac{-1}{\cos u} = \frac{1}{r}$$

$u < \pi$

$$\frac{|\sin u|}{\sin \pi} = \frac{\sin u}{\sin u \times \cos u} = \frac{1}{\cos u} = \frac{1}{r}$$

الف) $\frac{\pi}{2} + = \sqrt{\cos x} = \sqrt{0} = 0$ ✓

$\cos u > 0$

$\frac{\pi}{2} = \cos \frac{\pi}{2} < 0 \Rightarrow$ ✓

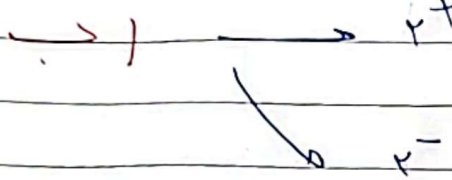
در این حالت

$\Rightarrow \sqrt{\frac{1}{100} - \frac{2}{100}} = \sqrt{\frac{-19}{100}} \Rightarrow \sqrt{-19} \Rightarrow \sqrt{-19}$

عقده
ریشه را می توان نوشت

$$\text{ii)} \quad \frac{1}{n^p} \frac{[E \sin n]}{n^r} = -1 = \frac{E \sin n}{e^{-}} \quad \text{--- } \omega$$

$$\frac{0}{-1} \quad \frac{0}{-1} \quad \frac{+}{+}$$



$$\frac{n - \Sigma}{n - r} = \frac{n + r}{n - 1} = \Sigma$$

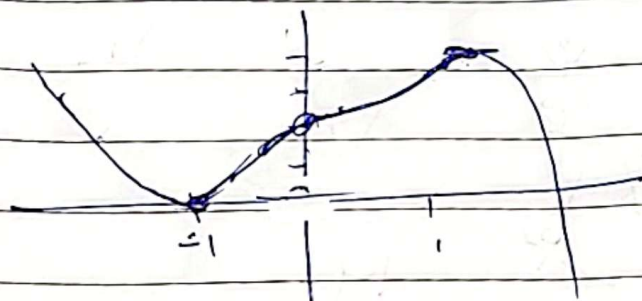
$$\frac{n^r - r}{n - 1} = \frac{1}{1} = 1$$

$$\text{iii)} \quad \omega n^p - p \omega + r \Rightarrow \frac{1}{\omega} \frac{d - p}{r} \Rightarrow \frac{d - p}{r} = \omega + p + r = \phi$$

$$\frac{1 \omega n^r - 1 \omega n^r}{1 \omega n^r (1 - n^r)}$$

$$\frac{-1}{-1} \quad \frac{0}{0} \quad \frac{1}{1}$$

$$-1 \quad +1 \quad +1 \quad -1$$

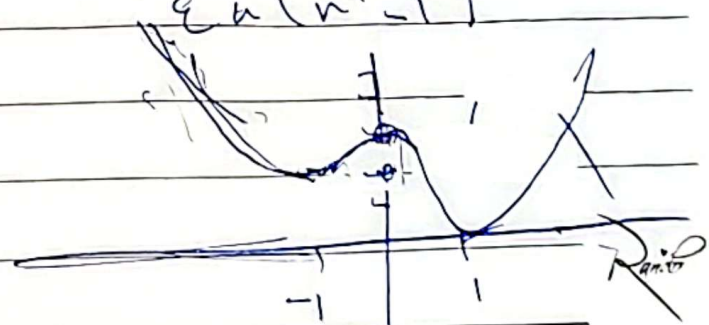


$$\text{iv)} \quad n \Sigma - r n^p + p \Rightarrow \Sigma n^p - \Sigma n$$

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

$$\frac{-1}{-1} \quad \frac{0}{0} \quad \frac{+1}{+1}$$

$$-1 \quad +1 \quad +1 \quad -1$$



$$(-1) \Sigma - r (-1)^p + p \Rightarrow \phi \Sigma - r + p > r$$

$$0 \Rightarrow 0 - 0 + p = r \quad 1 \Rightarrow 1 - r + p = 0$$