

نام و نام خانوادگی: کوروش شیرازی فر پاسخنامه تشریحی تکلیف شماره ۲۱ کلاس (۹۰/۱۰) دهم A.....

$$\lim_{n \rightarrow \infty} f(n) = f(a) = \frac{2 \pm a \cdot n \cdot b}{\sqrt{1-a}}$$

$$2a^3 + (m-3)a^2 + a = 0 \Rightarrow 2a^3 + (m-1)a = 0 \Rightarrow a^2(2a + m - 1) = 0 \Rightarrow m = 1 - 2a$$

$$4a^2 + (m+3)a + \frac{m}{4} = 0 \Rightarrow 4a^2 + (1 - 2a + 3)a + \frac{1-2a}{4} = 0 \Rightarrow 4a^2 + 4a - 2a + 1 - a = 0 \Rightarrow 3a^2 + 3a + 1 = 0 \Rightarrow (2a+1)^2 = 0 \Rightarrow a = -\frac{1}{2} \rightarrow m = 3$$

$$\left. \begin{array}{l} \text{صورت} = 0 \\ \text{مخرج} \neq 0 \end{array} \right\} \begin{array}{l} (1)^2 + (ax+1) + b = 0 \rightarrow a+b = -1 \rightarrow b = -1-a \\ ax^2 + am + b = 0 \end{array}$$

$$b = -1-a \rightarrow \Delta \geq 0 \rightarrow \Delta = (-a)^2 - 4 \times 1 \times (-1-a) = a^2 + 4a + 4 = (a+2)^2 \geq 0 \Rightarrow a = -2 \rightarrow b = 1$$

$$\tan\left(\frac{(n+1)\pi}{\epsilon}\right) \xrightarrow{n=1} \tan\frac{\pi}{\epsilon} = -1 \quad (I)$$

$$\frac{1}{a(1-n)} \xrightarrow{1 < n < 2} \frac{n^2 + n - 2}{a(1-n)} = \frac{(n-1)(n+2)}{a(1-n)} = \frac{-(n+2)}{a} \xrightarrow{n=1} -\frac{3}{a}$$

$$(II) \quad \frac{3}{a} \quad I = II \quad \text{شرط یونیتاری} \quad -1 = -\frac{3}{a} \rightarrow a = 3$$

$$a \neq 0 \rightarrow b(0 - [-a]) = 1 \cdot b \quad \text{شرط یونیتاری} \quad 1 \cdot b = \frac{-21}{12} \rightarrow b = \frac{-21}{12} \rightarrow a \times b = \frac{-21}{\epsilon}$$

تابع $f(n) = -2a$ تابع غیر صفر $a \neq 0$

$$\Rightarrow b = 0 \rightarrow f(n) = -2a$$

$$\frac{a}{f(b)} = \frac{a}{-2a} = \frac{-1}{2}$$

$$\lim_{x \rightarrow a} \frac{x^p + mx + n}{a - x} = f(a) = r \rightarrow \text{خرج} \Rightarrow \text{عدد} = 0 \rightarrow x^p + mx + n$$

$$x^p + mx + n = (x-a)(x+k) \rightarrow \frac{(x-a)(x+k)}{a-x} = -(x+k) \rightarrow \lim_{x \rightarrow a} -(x+k) = -(a+k) = r$$

$$\Rightarrow a+k = -r \rightarrow k = -a-r \Rightarrow (x-a)(x-a-r) = x^p - (ra+r)x + a^p + ra$$

$$m = -(ra+r) \quad n = a^p + ra \quad f(ra) = 0 \Rightarrow fa^p + ram + n = 0 \Rightarrow fa^p + ra(-ra-r)$$

$$+ (a^p + ra) = 0 \Rightarrow a^p - ra = 0 \Rightarrow a(a-r) = 0 \rightarrow a = r \rightarrow m = -(ra+r) = -r \rightarrow n = 1$$

$$n-m = 1 - (-r) = 1+r$$

$$x \rightarrow n^- \quad \lim_{a \rightarrow n^-} f(n) = (1-a)(n-1) + (ra^p-1)(-n)$$

$$f(n) = (1-a)n + (ra^p-1)(-n-1) \Rightarrow 1-a = ra^p-1$$

$$x \rightarrow n^+$$

$$\Rightarrow ra^p + a - r = 0 \rightarrow (ra-r)(a+1) = 0 \Rightarrow a = \frac{r}{r} \quad \text{ب } a = -1 \rightarrow \lim_{a \rightarrow n} 1-a = \frac{1}{r}$$

$$f(n) = b \sin\left(\frac{\pi}{a}\right) = \sin\left(\frac{\pi}{r}\right) = -1 \rightarrow f(n) = b(-1) = -b \rightarrow b = -\frac{1}{r}$$

$$\rightarrow \frac{a}{b} = -r$$

$$x \rightarrow a \quad \text{عدد} \rightarrow 0$$

$$|ax+a| = |a(x+1)| \quad x=a \rightarrow a(a+1) = 0$$

$$\text{خرج} \rightarrow 0$$

$$\Rightarrow a = -1 \quad \checkmark$$

$$a = 0 \quad x$$

$$x^p + (m-r)x + a^p \xrightarrow{a=-1} x^p + (m-r)x + 1$$

$$x = -1 \rightarrow (-1)^p + (m-r)(-1) + 1 = 0 \rightarrow -1 - (m-r) + 1 = 0 \rightarrow m = r$$

$$\lim_{x \rightarrow -1} f(x) = \frac{\sqrt{r} |x+1|}{|x^p + 1|} \rightarrow f(x) = \frac{\sqrt{r}}{|x^p + 1|} \quad \lim_{x \rightarrow -1} f(x) = \frac{\sqrt{r}}{|(-1)^p + 1|} = \frac{\sqrt{r}}{2} = \frac{\sqrt{r}}{2}$$