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نام و نام خانوادگی: پاسنامه تشریحی تکلیف شماره ۱۱... کلاس: در:
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۱- تعارض بین (دلیل) و این خارج مهم میزنند

$$\Delta = 0 \rightarrow (m+1)^2 - 4\left(\frac{m}{1}\right) \times 4 = 0 \rightarrow m^2 + 2m + 1 - 16 = 0 \rightarrow m^2 + 2m - 15 = 0 \rightarrow m = 3$$

$$\lim_{x \rightarrow a} \frac{\sqrt{4x^2 + 9} + \frac{1}{x}}{|4x^2 + 9|} = \frac{\sqrt{4\left(\frac{1}{4}\right)^2 + \frac{1}{4}}}{|4\left(\frac{1}{4}\right)^2 + 9|} = \frac{\sqrt{1 + \frac{1}{4}}}{|1 + 9|} = \frac{\sqrt{\frac{5}{4}}}{10} = \frac{\sqrt{5}}{20}$$

$$\lim_{x \rightarrow \frac{1}{4}} \frac{\sqrt{4x^2 + 9}}{|4x^2 + 9|} = \frac{\sqrt{4\left(\frac{1}{4}\right)^2 + 9}}{|4\left(\frac{1}{4}\right)^2 + 9|} = \frac{\sqrt{1 + 9}}{10} = \frac{\sqrt{10}}{10}$$

$$4a^2 + a^2 = 0 \rightarrow a^2(4+1) = 0 \rightarrow \begin{cases} a = 0 \rightarrow \frac{0}{0} \times \\ a = -\frac{1}{5} \rightarrow \frac{\sqrt{4\left(-\frac{1}{5}\right)^2 + 9}}{|4\left(-\frac{1}{5}\right)^2 + 9|} = \frac{\sqrt{\frac{4}{25} + 9}}{|\frac{4}{25} + 9|} = \frac{\sqrt{\frac{235}{25}}}{|\frac{235}{25}|} = \frac{\sqrt{235}}{235} \checkmark \end{cases}$$

$$\frac{\tan b}{\sqrt{-\frac{1}{4}}} = \frac{\sqrt{5}}{10} \rightarrow \tan b = \frac{\sqrt{5}}{10} \rightarrow b = \frac{\pi}{4}$$

$$f(n) = \frac{n^2 + an + b}{n-1} \xrightarrow{n \rightarrow 1} \frac{1 + a + b}{0} \rightarrow \text{مخرج صفر}$$

$$\left[\frac{b-a}{1} \right] = \left[\frac{-1}{1} \right] = -1$$

$$\Delta n^2 - an + b = 0 \rightarrow \Delta a + b = 0 \rightarrow a - b = 0 \rightarrow a = b$$

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$$\frac{(n+1)(n-1)}{a(1-n)} \xrightarrow{\frac{-1}{1-1+}} \frac{(n+1)(n-1)}{a(n-1)} = \frac{-n+1}{a} \rightarrow \tan \frac{\pi}{4} = \frac{-1}{a} \rightarrow a = -1$$

$$n \rightarrow \infty \rightarrow \left[\frac{-1}{a} \right] = -1, \quad \frac{-1}{a} = b(a - (-1)) \rightarrow \frac{-1}{a} = b(b+1) \rightarrow b = -1$$

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$$f(n) = a[n] + a + b[a] + b[a] + b$$

$$n \rightarrow 0^+ : a[0^+] + a + b[0^+] + b[a] + b = a + b[a] + b$$

$$n \rightarrow 0^- : a[0^-] + a + b[0^-] + b[a] + b = b[a]$$

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

$$\text{مخرج صفر} \rightarrow a + b[a] + b = b[a] \rightarrow a = -b$$

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$$f(n) = b[n^2 - an] - 1a \xrightarrow{n \rightarrow 0} f(n) = -1a$$

$$\frac{a}{f(a)} = \frac{a}{-1a} = \left[\frac{-1}{1} \right]$$

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$$f(u) = \begin{cases} \frac{n^r + mn + n}{a - n} & n \neq a \\ r & n = a \end{cases} \quad \text{multiplication} \rightarrow \begin{matrix} \text{num} \\ n - a \\ \text{den} \end{matrix}$$

$$\frac{(n-a)(u-a)}{-(u-a)} = -n+a \xrightarrow{f(u)=r} -(a-a) = r \rightarrow ar$$

$$(n-a)(u-a) = n^r \cdot \frac{r}{a-a} + r = n^r + mn + n \rightarrow \begin{matrix} m = \frac{r}{a-a} \rightarrow m = -1 \\ n = r \rightarrow n = a \end{matrix} \quad \checkmark \quad n \cdot m = \frac{r}{a}$$

$$n \rightarrow 0^+ \rightarrow (1-a)(0) + (r/a)(-1) = 1 - r/a$$

$$n \rightarrow 0 \rightarrow b \sin\left(\frac{r}{a}\right)$$

$$n \rightarrow 0^- \rightarrow (1-a)(-1) + (r/a)(0) = a-1$$

$$\text{ii) } 1 - r/a = a-1 \rightarrow r/a + a - r = 0 \rightarrow ar = 1 \rightarrow \begin{matrix} 1 - r/a = r \\ a-1 = -r \end{matrix} \quad b \sin\left(\frac{r}{a}\right) \rightarrow 0 \quad \text{just}$$

$$\lim_{n \rightarrow \frac{1}{r}} \frac{|(a-1)(u+m+1)|}{|(a-1)(u+1)| + |a-1|} = \frac{|a-1|/(u+m+1)}{|a-1|/(m|u+1|+1)} = \frac{|m+r|}{m+1} = \frac{m}{m+r}$$

$$m \geq -r \rightarrow m^r + fm + f = m^r + m \rightarrow m^r - m - f = 0 \rightarrow \begin{cases} m = -1 \\ m = f \end{cases}$$

$$m = f \rightarrow \frac{|a^r f(a-a)|}{f|a-1|/|u+1| + |a-1|} = \frac{|a-1|/(f|u+1|+1)}{|a-1|/(f|u+1|+1)} \rightarrow \lim_{u \rightarrow \frac{1}{f}} \frac{a + \frac{1}{f}}{f \cdot \frac{1}{f} + 1} = \frac{r/f}{r} = \frac{r}{f} = \frac{r}{a}$$

$$m = -1 \rightarrow \frac{|a^{-1} a|}{-|a-1|/|u+1| + |a-1|} = \frac{|a|/|a-1|}{|a-1|/(-|u+1|+1)} \quad \times$$

$$as \rightarrow \begin{pmatrix} \text{num} \\ \text{den} \end{pmatrix} \rightarrow \sqrt{r} |a^r + a| = 0$$

$$a(a+1) = 0 \rightarrow \begin{matrix} as = 0 \rightarrow C_{as} = 0 \rightarrow \text{Multiply} \\ as = 1 \checkmark \rightarrow \text{ج} \rightarrow ns = 1 \rightarrow \end{matrix}$$

$$f(u) = \frac{\sqrt{r} |a-1|}{|u^r + (r-r)u^r + 1|} = \frac{\sqrt{r} |u+1|}{|u^r + 1|}$$

$$\lim_{n \rightarrow \frac{1}{r}} f(u) \rightarrow \frac{\sqrt{r} |a|}{|1-1|} = \frac{\sqrt{r} |u+1|}{|u^r + 1|} = \frac{\sqrt{r}}{\left(\frac{1}{r} + 1\right)} = \frac{\sqrt{r}}{\frac{1+r}{r}} = \frac{r\sqrt{r}}{1+r} \quad (1, \sqrt{r})$$

$$\lim_{a \rightarrow 0^+} \frac{a^r + |a|}{a^r + a/a} = \frac{0}{0} \rightarrow \lim_{a \rightarrow 0^+} \frac{a^r + a}{a^r + a} = \lim_{a \rightarrow 0^+} \frac{a(a+1)}{a(a+a)} = \frac{1}{a}$$

$$\lim_{a \rightarrow 0^-} \frac{a^r + |a|}{a^r + a/a} = \frac{0}{0} \rightarrow \lim_{a \rightarrow 0^-} \frac{a^r - a}{a^r - a} = \lim_{a \rightarrow 0^-} \frac{a(a-1)}{a(a-a)} = \frac{-1}{-a} = \frac{1}{a}$$

$$f(b) = \frac{r/a - 1}{r/a + r} = \frac{1}{a} \rightarrow r/a - a = r/a + r \rightarrow r/a - r/a - r = 0 \rightarrow \begin{cases} a = r \\ a = \frac{1}{r} \end{cases} \quad \times$$

$$a = r \rightarrow \lim_{a \rightarrow \frac{1}{r}} f(u) = \lim_{a \rightarrow \frac{1}{r}} \frac{a^r + a}{a^r + r} = \frac{\frac{1}{r} + \frac{1}{r}}{\frac{1}{r} + 1} = \frac{\frac{2}{r}}{\frac{1+r}{r}} = \frac{2}{1+r} = \frac{r}{a}$$