

۱۹/۱۵ ~ آفرین ★

باران تسلیبی

دوازدهم دخترب

تکلیف ۲۱

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$$\Delta = 0 \rightarrow (m+3)^2 - 12m = 0 \rightarrow m^2 - 6m + 9 = 0 \rightarrow \boxed{m = 3}$$

$$\lim_{x \rightarrow -\frac{1}{r}} \frac{\sqrt{4(x+\frac{1}{r})}}{|2x^3 + \frac{1}{r}|} \rightarrow \lim_{x \rightarrow -\frac{1}{r}} \frac{\sqrt{4} |x + \frac{1}{r}|}{2 |x^3 + \frac{1}{r}|} = a = \left(\frac{-1}{r} \right)$$

$$\lim_{x \rightarrow -\frac{1}{r}} \frac{\sqrt{4(x+\frac{1}{r})}}{|2x^3 + \frac{1}{r}|} \rightarrow \lim_{x \rightarrow -\frac{1}{r}} \frac{\sqrt{4} |x + \frac{1}{r}|}{2 |x^3 + \frac{1}{r}|} \rightarrow \frac{\sqrt{4} |x + \frac{1}{r}|}{2 |x + \frac{1}{r}| |x^2 - \frac{x}{r} + \frac{1}{r}|} = \frac{2\sqrt{4}}{3}$$

$$f\left(-\frac{1}{r}\right) = \frac{2 \tan b}{\sqrt{\frac{1}{r}}} = \frac{2\sqrt{4}}{3} \rightarrow \sqrt{r} \tan b = \frac{\sqrt{4}}{3} \Rightarrow \boxed{b = \frac{\pi}{4}} \quad \checkmark$$

$$f(x) = a - a + b = 0 \rightarrow -a + b + d = 0$$

عدد (1) با صفر

هم متفاوت

$$\rightarrow a + b + 1 = 0$$

$$\rightarrow \begin{matrix} -a + b + d = 0 \\ + \\ a + b + 1 = 0 \end{matrix}$$

$$2b + 4 = 0 \rightarrow b = -2$$

$$a = 2$$

$$\left[\frac{b-2a}{2} \right] \Rightarrow \left[\frac{-2-4}{2} \right] = \left[\frac{-6}{2} \right] = -3$$

2

$$\tan \frac{\pi}{4} = \frac{|x^2 + x - 2|}{x(1-x)}$$

0/0 فرم

$$\lim_{x \rightarrow 1} \frac{|x^2 + x - 2|}{x(1-x)} = -1 \rightarrow \frac{|(x-1)(x+2)|}{(1-x)x} \Rightarrow \frac{-(x+2)}{x} = -1$$

مغذلف العلامة

$$\frac{-2}{1} = -1 \rightarrow a = 2$$

x=0

$$\frac{|2a + 0 - 2|}{2(1-0)} = b(0 - [-a])$$

$$\frac{2a}{-2} \Rightarrow \frac{-2}{2} = b(0 - [-a]) \rightarrow \frac{-1}{1} = 1 \cdot b \rightarrow b = -1$$

$$ab = 1 \times \frac{-1}{1} = -1$$

$$f(x) = a[x+1] + b[x+[a+1]]$$

$$[x+1+[a]]$$

$$f(x) = [x+1](a+b) + b[a]$$

$$a = -b$$

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

2

$$f(x) = b[x^2 - ax] - 2a$$

$$b = 0$$

$$\frac{a}{-2a} = \frac{-1}{2}$$

2

$$\lim_{x \rightarrow a} \frac{x^r + mx + n}{a - x} = r \quad a^r + ma + n = 0$$

$$ra^r + rma + n = 0$$

$$f(a) \neq f(a) \rightarrow a \neq 0 \quad \text{بما أن } a \neq 0, a$$

$$(x-a)(x-ra) = x^r - \frac{ra^r}{m} + \frac{ra^r}{n}$$

$$\frac{(x-a)(x-ra)}{a-x} = r \rightarrow -(x-ra) = r \rightarrow a = r$$

$$m = -ra = -4 \quad n - m = 1 + 4 = 15$$

$$n = ra^r = 1$$

$$f(x) = \begin{cases} (1-a)[x] + (ra^r-1)[-x]; & x \neq 2 \\ b \sin\left(\frac{\pi}{a}\right) & ; x \in \mathbb{Z} \end{cases}$$

$$b \sin\left(\frac{\pi}{a}\right) = 0 \quad \text{X}$$

$$\frac{a}{b} = ? \quad [x] + [-x] \xrightarrow{x \neq 2} -1$$

$$ra^r - 1 = 1 - a \rightarrow ra^r + a - r = 0 \rightarrow \begin{cases} a = -1 \\ a = \frac{r}{\mu} \end{cases}$$

$$a = \frac{r}{\mu} \rightarrow \frac{a}{b} = \left(\frac{r}{\mu}\right)$$

$$b = 1$$

$$b \sin\left(\frac{\pi}{\frac{r}{\mu}}\right) = b \sin\left(\frac{\mu\pi}{r}\right) = -1$$

$$b = 1$$

$$f(x) = \begin{cases} \frac{|x^r + mx - m - 1|}{m|x-1| + |x-1|} & ; x \neq 1 \\ \frac{m}{m+r} & ; x = 1 \end{cases}$$

$$\lim_{x \rightarrow \frac{1}{m}} f(x)$$

$$\lim_{x \rightarrow 1} \frac{|x^r + mx - m - 1|}{m|x-1| + |x-1|} = \frac{m}{m+r}$$

$$x \rightarrow 1 \Rightarrow \frac{|x-1| \times |x+m+1|}{|x-1| \times (m|x+1| + 1)} \xrightarrow{x \rightarrow 1} \frac{|x+m+1|}{m|x+1| + 1} = \frac{m}{m+r}$$

$$\frac{|m+r|}{r(m+1)} = \frac{m}{m+r} \rightarrow \begin{cases} m^r + \Sigma m + \Sigma > r m^r + m \\ m^r - r m - \Sigma = 0 \\ (m-2)(m+1) = 0 \end{cases} \rightarrow \begin{cases} m = -1 \\ m = 2 \end{cases}$$

$$m = 2 \rightarrow \frac{|x^r + \Sigma x - \omega|}{|x-1| |x+1| + |x-1|} \rightarrow \frac{|x-1| |x+\omega|}{|x-1| (r|x+1| + 1)} \rightarrow \frac{r}{1}$$

$$m = 2 \rightarrow \frac{|x^r + \Sigma x - \omega|}{|x-1| |x+1| + |x-1|} \rightarrow \frac{|x-1| |x+\omega|}{|x-1| (r|x+1| + 1)} \rightarrow \frac{r}{1}$$

$$x=a$$

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

$$a = 0 \times a = -1 \checkmark$$

$$a^r + a(m-r) + a^r = 0 \xrightarrow{a=-1} m = r$$

$$\lim_{x \rightarrow -1} \frac{\sqrt{r}|-x-1|}{|x^r+1|} = \frac{\sqrt{r}|-(x+1)|}{|(x+1)(x^r-x+1)|} \left(\frac{\sqrt{r}}{r} \right)$$

$$\lim_{x \rightarrow 0^+} \frac{x^r + |x|}{x^r + a|x|} \xrightarrow{r=0} \frac{x^r + x}{x^r + ax} \Rightarrow \lim_{x \rightarrow 0^+} \frac{x(x+1)}{x(a+x)} = \frac{1}{a} \quad -10$$

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

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

$$a = r \rightarrow \lim_{x \rightarrow \frac{1}{r}} f(x) = \lim_{x \rightarrow \frac{1}{r}} \frac{x^r + x}{x^r + rx} = \left(\frac{r}{a} \right)$$

$$f_1^+ = (1-a)[z^+] + (ra^r-1)[-z^+] = (1-a)z + (ra^r-1)(-z-1)$$

$$f_1^- = (1-a)[z^-] + (ra^r-1)[-z^-] = (1-a)(z-1) + (ra^r-1)(-z)$$

$$\lim_{n \rightarrow z^+} f_1(n) = \lim_{n \rightarrow z^-} f_1(n) \Rightarrow z - a/z - ra^r z - ra^r + z + 1 = z - 1 - a/z + a - ra^r z + z$$

$$a-1 = 1-ra^r \Rightarrow a = -1 \quad \text{or} \quad a = \frac{r}{r}$$

$$b \sin\left(\frac{r}{r}\right) = -b \Rightarrow -b = -\frac{1}{r} \Rightarrow b = \frac{1}{r} \Rightarrow \boxed{\frac{a}{b} = r}$$