

نوین کنکور

کنکور

امتحان نهایی

**نوین کنکور
شرط لازم و کافی
برای موفقیت**

novinkonkor.com

به نام دانی مطلق دکتر عارف خیری

۰۹۱۰۷۸۲۹۴۱۲

① نرنیج قدرت در دنیا هندو یک عدد گامی و مخالف مغز است.

$$x^2 + x - 1 \Rightarrow x^2 + x - 1 = 0 \Rightarrow x = \frac{-1 \pm \sqrt{5}}{2} \Rightarrow x = \frac{-1 + \sqrt{5}}{2} \quad \text{نرنیج}$$

$$\frac{2x^3 + 3x^2 + 11x + 2}{(x^2 + 2x + 1)^2} = \frac{2(1x^3 + 15x^2 + 7x + 1)}{(x^2 + 2x + 1)^2}$$

$$= \frac{2(2x + 1)^2}{(2x + 1)^2} = \frac{2}{2x + 1} \xrightarrow{x = \frac{-1 + \sqrt{5}}{2}} \frac{2}{2(\frac{-1 + \sqrt{5}}{2}) + 1} = \frac{2}{\sqrt{5}} = \frac{2\sqrt{5}}{5}$$

$$(B \cap A) - B' = B \cap A \cap (B')' = B \cap B \cap A = B \cap A \quad \text{نرنیج ۲}$$

$$(B \cap A) \cap (B \cup A) = B \cap A$$

$$A' \cap B = B \cap A' \Rightarrow (B \cap A') \cup (B \cap A) = B \cap (A \cup A') = B \quad \text{نرنیج ۳}$$

$$V - (a > 0) \Rightarrow a < \frac{V}{r} \Rightarrow a = r$$

$$a - r > 0 \Rightarrow a > r$$

$$A \begin{vmatrix} 9 \\ 1 \end{vmatrix}, B \begin{vmatrix} 1 \\ 1 \end{vmatrix}$$

$$x_s = \frac{1+9}{r} = x, \quad s \begin{vmatrix} b \\ a-r \end{vmatrix} = s \begin{vmatrix} a \\ r \end{vmatrix} \Rightarrow y = k(a-a) + r$$

$$y \in B \Rightarrow 1 = k(a-a) + r \Rightarrow k = \frac{1-r}{a-r}$$

$$s = \alpha + \beta = \frac{-b}{a} \Rightarrow \frac{1}{s} = \frac{ra}{b} = \log_e \varepsilon = r \log_e r \quad \text{نیز (✓)}$$

$$\Rightarrow \frac{a}{b} = \frac{1}{r} \log_e r \Rightarrow \frac{b}{a} = \log_{\frac{1}{r}} 10 \quad \frac{1}{r} \log_e r = \log_{\frac{1}{r}} 10$$

$$ra = b + c \Rightarrow r = \frac{b}{a} + \frac{c}{a} \Rightarrow \frac{c}{a} = r - \frac{b}{a} = r - \log_{\frac{1}{r}} 10$$

$$\Rightarrow \frac{c}{a} = r \log_{\frac{1}{r}} \left(\frac{1}{r} \right) - \log_{\frac{1}{r}} 10 = \log_{\frac{1}{r}} \left(\frac{1}{r} \right)^r - \log_{\frac{1}{r}} 10 = \log_{\frac{1}{r}} \frac{r}{10} = \log_{\frac{1}{r}} \frac{1}{\frac{10}{r}}$$

$$\left(\frac{1}{r} \right)^{\frac{c}{a}} = \left(r^{-\frac{1}{r}} \right)^{\frac{c}{a}} = r^{-\frac{1}{r} \times \frac{c}{a}} = r^{-\frac{1}{r} \log_{\frac{1}{r}} \frac{1}{\frac{10}{r}}} = r^{\log_{\frac{1}{r}} \left(\frac{1}{\frac{10}{r}} \right)^{-\frac{1}{r}}}$$

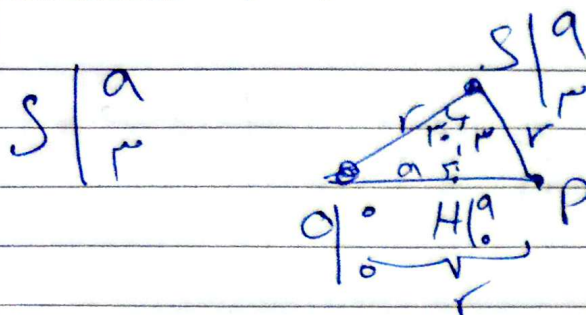
$$= \left(r^{\frac{1}{a}} \right)^{-\frac{1}{r} \times r} = \frac{1}{a} = \frac{1}{\varepsilon} = \sqrt{\frac{1}{a}}$$

$$|\varepsilon x - r| = x^r - x + a \quad x_s = \frac{-b}{ra} = \frac{-(-1)}{r} = \frac{1}{r} \quad \text{نیز (✓)}$$

$$\varepsilon \left(\frac{1}{r} \right) - r = 0 \quad S \left(\frac{1}{r}, 0 \right) \quad y_s = 0$$

$$\left(\frac{1}{r} \right)^r - \frac{1}{r} + a = 0 \Rightarrow a = \frac{1}{\varepsilon} \quad \begin{cases} -\varepsilon x + r = x^r - x + \frac{1}{\varepsilon} \\ \varepsilon x - r = x^r - x + \frac{1}{\varepsilon} \end{cases}$$

$$\Rightarrow \begin{cases} x^r + rx - \frac{r}{\varepsilon} = 0 \Rightarrow x = \frac{-r \pm \varepsilon}{r} \rightarrow -r \checkmark \\ x^r - rx + \frac{r}{\varepsilon} = 0 \Rightarrow x = \frac{r \pm \varepsilon}{r} \rightarrow \varepsilon \checkmark \text{ max}, \quad r \checkmark \end{cases}$$



$$\tan \theta = \frac{a}{r} = \frac{r}{r} \Rightarrow a = r$$

$$x > r \Rightarrow x+1 > r \Rightarrow x+1 > 0 \Rightarrow f(x) > 0 \quad \text{نیز (۱)}$$

$$x < r \Rightarrow -rx > -r^2 \Rightarrow -rx + v > -r^2 + v = -1 \Rightarrow -rx > -1$$

$$\Rightarrow -rx > -1 \Rightarrow f(x) > 0 \Rightarrow \forall x \Rightarrow f(x) > 0$$

$$\Rightarrow g(x) = -x + \varepsilon \Rightarrow g(\varepsilon) = -(\varepsilon) + \varepsilon = 0$$

$$(f \circ f)(a) = a \Rightarrow f(x) = x \quad \text{نیز (۱)}$$

$$4x - x\sqrt{x} - r\sqrt{x} + 1 = x \Rightarrow 3x + 1 = (x+r)\sqrt{x}$$

$$\Rightarrow 3x + 1 = (x+r)\sqrt{x} \xrightarrow{x \neq 0} \sqrt{x} = \frac{3x+1}{x+r} \Rightarrow x = \frac{(3x+1)^2}{(x+r)^2}$$

$$f(a-9) = f(2a-9) = f(14) = 32 \Rightarrow a = 32$$

$$ax+b > 0 \Rightarrow x > -\frac{b}{a} \xrightarrow{\text{ضرب في } -1} -\frac{b}{a} = -\frac{1}{r} \quad \text{فرض (11)}$$

$$\Rightarrow \frac{b}{a} = \frac{1}{r} \Rightarrow b = \frac{1}{r} a$$

$$\xrightarrow{(r, r)} \text{ل.ج.} \quad \Sigma a + \frac{a}{r} = r \Rightarrow \text{ل.ج.} \quad \frac{\Sigma \delta a}{r} = r \Rightarrow a = \frac{a}{\frac{\Sigma \delta}{\delta}} = r$$

$$\Rightarrow \underline{a=r}, \underline{b=1} \quad f(x) = \frac{r^x - b}{a} = \frac{r^x - 1}{r}$$

$$\Rightarrow f(-r) = \frac{r^{-r} - 1}{r} = -\frac{r}{a}$$

$$(1 + \cos \alpha) \left(\sqrt{1 + \cot^2 \alpha} + \frac{1}{\tan \alpha} \right) \quad \text{فرض (15)}$$

$$= (1 + \cos \alpha) \left(\frac{1}{|\sin \alpha|} + \frac{\cos \alpha}{\sin \alpha} \right) \xrightarrow{\text{ضرب في } \sin \alpha} \sin \alpha$$

$$= (1 + \cos \alpha) \left(\frac{\cos \alpha - 1}{\sin \alpha} \right) = \frac{\cos^2 \alpha - 1}{\sin \alpha} = -\frac{\sin^2 \alpha}{\sin \alpha}$$

$$= -\sin \alpha$$

$$\tan(\alpha + 15^\circ) = \frac{\sqrt{r}}{r}$$

1. نرین (13)

$$\cot(11^\circ - \alpha) = \frac{1}{\tan(11^\circ - \alpha)} = \frac{1}{\tan(15^\circ - (\alpha + 15^\circ))}$$

$$= \frac{\tan 15^\circ - \tan(\alpha + 15^\circ)}{1 + \tan 15^\circ \tan(\alpha + 15^\circ)} = \frac{\frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r}}{1 - \frac{\sqrt{r}}{r} \times \frac{\sqrt{r}}{r}} = \frac{0}{1 - \frac{r}{r}} = \frac{0}{0}$$

$$A = \sqrt{r} \cos(15^\circ) \sin 15^\circ - \sqrt{r} \sin(15^\circ) \cos(15^\circ) \quad \text{1. نرین (14)}$$

$$\cos(11^\circ \pm \alpha) = -\cos \alpha \quad \text{نکته}$$

$$\cos(11^\circ - 15^\circ) = -\cos 15^\circ \quad \sin 15^\circ + \epsilon \delta = \cos 15^\circ = \frac{\sqrt{r}}{r}$$

$$\cos(15^\circ) = \cos(11^\circ + 15^\circ) = -\cos 15^\circ = -\frac{\sqrt{r}}{r}$$

$$\sin(15^\circ - \alpha) = -\cos \alpha \Rightarrow \sin(15^\circ - 15^\circ) = \sin(15^\circ) = -\frac{\sqrt{r}}{r}$$

$$A = \sqrt{r} \times \left(-\frac{\sqrt{r}}{r}\right) (-\cos 15^\circ) - \sqrt{r} \times \left(\frac{\sqrt{r}}{r}\right) \times (-\cos 15^\circ)$$

$$= \frac{0}{r} \cos 15^\circ = \frac{0}{r} \cos 15^\circ$$

$$\tan 5x + \tan 5x = \tan(10x) = 0 \Rightarrow \tan 5x = \tan(-5x) \quad \text{1. نرین (15)}$$

$$5x = k\pi - 5x \Rightarrow 10x = k\pi \Rightarrow x = \frac{k\pi}{10} \quad k = 1, 3, 5, 7$$

$$a > 0 \Rightarrow \lim_{x \rightarrow \sqrt{a}^+} \frac{r\sqrt{x-a} + r\sqrt{x} - r\sqrt{a}}{\sqrt{x^2 - a^2}} =$$

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$$= \lim_{x \rightarrow \sqrt{a}^+} \frac{r\sqrt{x-a}}{(\sqrt{x-a})(\sqrt{x+a})} + \lim_{x \rightarrow \sqrt{a}^+} \frac{r(\sqrt{x} - \sqrt{a})}{(\sqrt{x-a})(\sqrt{x+a})} \cdot \frac{\sqrt{x+a}}{\sqrt{x+a}}$$

$$= \frac{r}{\sqrt{a}} = \sqrt{\frac{r}{a}}$$

$$r(x-a) = r(\sqrt{x} - \sqrt{a})(\sqrt{x} + \sqrt{a})$$

$$= r\sqrt{x-a}\sqrt{x+a}$$

$$\lim_{x \rightarrow \sqrt{a}^+} \frac{r\sqrt{x-a}\sqrt{x+a}}{\sqrt{x-a}\sqrt{x+a}} = 0$$

$$x \rightarrow \sqrt{14} \Rightarrow (x - \sqrt{14})^r = x^r - r\sqrt{14}x + \sqrt{14}^r$$

$$\Rightarrow a = -r\sqrt{14}, b = \sqrt{14}^r \Rightarrow \frac{b}{a} = \frac{\sqrt{14}^r}{-r\sqrt{14}} = -\frac{\sqrt{14}^{r-1}}{r}$$

$$\left[\frac{b}{a}\right] = \left[-\frac{\sqrt{14}^{r-1}}{r}\right] = -1$$

$$f(x) = -\frac{a}{r}x + a \Rightarrow f^{-1}(x) = -\frac{r}{a}x + r$$

$$\lim_{x \rightarrow a} \frac{-\frac{r}{a}x + r}{-ax + \frac{r}{a}x + a} = r \Rightarrow \lim_{x \rightarrow a} \frac{-\frac{r}{a}x}{(a-r)x} = r \Rightarrow$$

$$\Rightarrow a|a-r| = 1 \Rightarrow \begin{matrix} a \geq r \\ a < r \end{matrix} \Rightarrow a = 1 + \sqrt{r}$$

LINE NOTE

$$x \rightarrow +: \lim_{x \rightarrow +} \frac{x(x+1)}{x(x+a)} = \frac{1}{a}$$

فرضه (19)

$$x \rightarrow -: \lim_{x \rightarrow -} \frac{x(x-1)}{x(x-a)} = \frac{-1}{-a} = \frac{1}{a} \Rightarrow \frac{1}{a} = \frac{a-1}{a+1}$$

$$\Rightarrow a = 1 \checkmark$$

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

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

$$\lim_{x \rightarrow \frac{\pi}{f}} \frac{\sin \pi x \cos \left(\frac{\pi}{f} - x \right)}{x - \frac{\pi}{f}} = \lim_{x \rightarrow \frac{\pi}{f}} \frac{r \cos \pi x \cos \left(\frac{\pi}{f} - x \right)}{x - \frac{\pi}{f}} = \frac{r \cos \pi \left(\frac{\pi}{f} \right) \cos \left(\frac{\pi}{f} - \frac{\pi}{f} \right)}{1} = \frac{r \cos \pi \left(\frac{\pi}{f} \right)}{1}$$

$$\frac{r \cos \pi \left(\frac{\pi}{f} \right)}{1} = -r$$

$$a+1=b \Rightarrow a=b-1$$

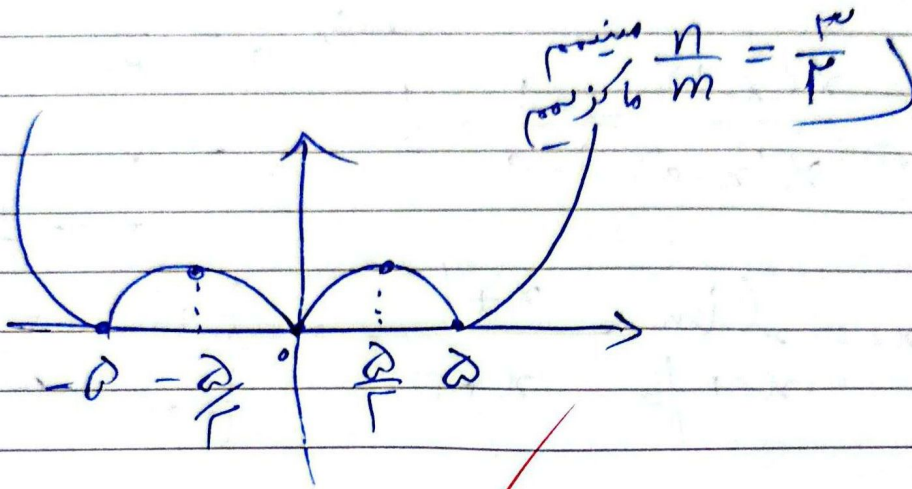
فرضه (21)

$$1 = f'(1^-) = f'(1^+) = \frac{r}{f} b x^{-\frac{1}{f}} \Rightarrow b = \frac{f}{r} \Rightarrow a = \frac{f}{r} - 1 = \frac{f-r}{r}$$

$$a+b = \frac{f}{r} + \frac{f-r}{r} = \frac{f+f-r}{r} = \frac{f}{r}$$

$$f(x) = |x|^p - a|x|$$

۱۱. ۲۰ (۲۲)



Dr. Khanjari

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