

نوین کنکور

کنکور

امتحان نهایی

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

novinkonkor.com

دکتر خفاری ۵۹۱۰۷۱۶۹۴۱۲ سنه ۱۴۴۱-۲۰۱۱
 ریاضی
 $S_n = \frac{a(q^n - 1)}{q - 1}, q \neq 1, q \neq 0$

$$S_q = vr S_r \Rightarrow \frac{a(q^q - 1)}{q - 1} = \frac{vra(q^r - 1)}{q - 1}$$

$$q^q - 1 = vr(q^r - 1) \Rightarrow$$

$$q^q - 1 = (\underbrace{q^q + q^r + 1}_{vr})(q^r - 1) \Rightarrow q^q + q^r + 1 = vr$$

$$\Rightarrow q^q + q^r - vr = 0 \Rightarrow (q^r + q)(q^r - 1) = 0$$

$$\Rightarrow \begin{cases} q = -\sqrt[q]{q} \\ q = r \end{cases} \Rightarrow \frac{a_r}{a_1} = \frac{q^q q^r}{q} = q^r = r \quad \text{نیزه ۲}$$

$$x^r + \frac{10}{x^r + 1} = 9 \Rightarrow x^r + 1 + \frac{10}{x^r + 1} = 10$$

$$a = x^r + 1 \Rightarrow a + \frac{10}{a} = 10 \Rightarrow a^2 + \frac{100}{a^2} + 20 = 100$$

$$\Rightarrow a^2 + \frac{100}{a^2} = 80 \Rightarrow (x^r + 1)^2 + \frac{100}{(x^r + 1)^2} = 80$$

نیزه ۳

if $B = U$ $A \cup B' \subseteq A \cap B$

$$\underline{B' = \emptyset}$$

$$A \cap B = A$$

$$A \subseteq A$$

نیزه ۴

$$x^r - \omega x + r = 0 \Rightarrow S = 0, P = r$$

(a)

$$\frac{r\alpha + \beta^0}{\omega\beta^r} = \frac{1}{r} \left\{ \frac{\Sigma}{\omega} \frac{(\alpha^r + \beta^r)}{(\alpha\beta)^r} + \frac{1}{\omega} (\alpha^r + \beta^r) \right\}$$

$$= \frac{1}{r} \left\{ \frac{\Sigma}{\omega} \frac{90}{\Sigma} + \frac{1}{\omega} (90) \right\} = \frac{90}{\omega} = 19$$

(r = 19)

$$\alpha^r + \beta^r = S^r - rPS = \omega^r - r \times r \times \omega = 150 - 19 = 90$$

$$\frac{r\alpha + \beta^0}{\omega\beta^r} = \frac{1}{r} \left\{ \underbrace{\frac{\Sigma}{\omega} \frac{\alpha}{\beta^r}}_A + \frac{1}{\omega} \beta^r + \underbrace{\frac{\Sigma}{\omega} \frac{\beta}{\alpha^r}}_A + \frac{1}{\omega} \alpha^r \right\}$$

$$\max f = 1 \Rightarrow \sqrt{mx^2 - 1x + 19} = 2 \Rightarrow \text{مکان ۲}$$

$$mx^2 - 1x + 19 = 0 \xrightarrow{x_5 = \frac{\Delta}{2m}} m \cdot \frac{4\Delta}{4m^2} - 1 \cdot \frac{\Delta}{2m} = -19$$

تکون بشرین معادله

$$\Rightarrow \frac{19 - 19}{m} = 19 \Rightarrow m = \frac{19}{19} \cdot \frac{\Delta}{\Delta} \Rightarrow [m] = 1$$

نیزه ۳

$$P(x) = x^2(x^2 + a) \xrightarrow{a = -1} P(x) = x^2(x-1)(x+1) \quad (1)$$

$$Q(x) = x^2(x^2 + 5x + 5) = x^2(x+1)(x+5)$$

$$\text{پ.پ.ب: } x^2(x+1) = x^2 + x \xrightarrow{n=2} \Rightarrow nq = 2(-1) = -2$$

نیزه ۱

$$0 \leq x \leq 5 \Rightarrow P(x) = 0 \Rightarrow x = 1$$

$$P(x) = 1 \Rightarrow \begin{cases} x-1=1 \Rightarrow x=2 \\ x+1=1 \Rightarrow x=0 \end{cases} \quad (4)$$

$$-5 \leq x < 0 \Rightarrow P(x) = 0 \Rightarrow x+1=0 \Rightarrow x=-1$$

$$\begin{cases} x-1=-1 \Rightarrow x=0 \\ x+1=-1 \Rightarrow x=-2 \end{cases}$$

در سه نقطه ۰، ۲، -۲
 سه اینک بزرگ
 نیزه ۳

$$f(a) = a \Rightarrow \lim_{x \rightarrow a} \frac{f(x)}{x} = \frac{f(a)}{a} = 1 \quad \text{(فرض ۱)} \quad (1)$$

$$\log r^{x+1} = (\log a - \log r)(\log a + \log r) \quad (11)$$

$$= \log \frac{a}{r} \Rightarrow r^{x+1} = \frac{a}{r} \Rightarrow x = \frac{1}{r}$$

$$\Rightarrow \log_{\frac{1}{r}} r^{-1} = \frac{-1}{\frac{1}{r}} = -r \quad \text{(فرض ۲)} \quad (12)$$

$$r \sin \alpha < r \sin \alpha \cos \alpha$$

$$\Rightarrow r \sin \alpha (1 - \cos \alpha) < 0 \Rightarrow \sin \alpha < 0$$

$\cos \alpha > 0$

$$\frac{\cos \alpha}{\sin \alpha} > 0 \Rightarrow \frac{\cos \alpha}{\sin \alpha} > 0 \Rightarrow \cos \alpha > 0 \quad \left. \begin{array}{l} \text{ربع ۲} \\ \text{فرض ۳} \end{array} \right\}$$

$$\frac{\cos 15^\circ - r \sin 15^\circ}{r \sin 15^\circ + r \sin 15^\circ} = \frac{\cos 15^\circ - r \sin 15^\circ}{2 \sin 15^\circ} \quad (13)$$

$$= \frac{1}{2} \cos 15^\circ - \frac{r}{2} = \frac{1}{2} \sqrt{2} \sqrt{2} \quad \text{(فرض ۴)}$$

$$\cot(15^\circ) = \cot(45^\circ - 30^\circ) = \frac{\cos(45^\circ - 30^\circ)}{\sin(45^\circ - 30^\circ)} = \frac{1 + \frac{\sqrt{3}}{2}}{1 - \frac{\sqrt{3}}{2}}$$

$$= \frac{1}{1 - \sqrt{3}} \times \frac{2 + \sqrt{3}}{2 + \sqrt{3}} = 2 + \sqrt{3}$$

$$\tan \beta = \frac{\sqrt{r}}{r}$$

(12)

$$\tan(\beta + \pi) = \frac{\sqrt{r} + \frac{\sqrt{r}}{r}}{1 - \frac{1}{r}} = \frac{2}{r} \sqrt{r}$$

$$\tan \alpha = \frac{r \times \sqrt{r}}{2 \sqrt{r} \times \sqrt{r}} = \frac{1}{2} \sqrt{r} = \frac{1}{2} \sqrt{r} \quad (13)$$

$$\lim_{x \rightarrow 0} \frac{k + \cos(\sqrt{a}x)}{kx^r} \stackrel{r}{\Rightarrow} k + 1 = 0 \Rightarrow k = -1 \quad (10)$$

$$\text{H.o.P: } \lim_{x \rightarrow 0} \frac{-\sqrt{a} \sin(\sqrt{a}x)}{-rx} \stackrel{0}{=} \lim_{x \rightarrow 0} \frac{-a \cos(\sqrt{a}x)}{-r} \stackrel{r}{\Rightarrow}$$

$$\Rightarrow \frac{a}{r} = r \Rightarrow a = r^2 \Rightarrow \frac{a}{k} = \frac{+4}{-1} = -4$$

(13)

$$x = -a : \frac{p}{m} \quad -ma - r = 0 \Rightarrow m = -\frac{r}{a} \quad (14)$$

$$y = -z = \frac{a^r}{m} \Rightarrow ar = \varepsilon m \Rightarrow ar = \frac{\Delta}{a} \Rightarrow a = r$$

(15)

$$\lim_{x \rightarrow \pi^-} \frac{\cot x}{x - \pi} = \frac{\cot \pi}{-1} = \frac{\cos \pi}{\sin \pi} = +\infty$$

(14) ∞

$$\text{Ex: } x=a \Rightarrow a^r + a = 0 \Rightarrow a(a+1) = 0$$

(1A)

$$\Rightarrow \frac{a}{0} = 0 \leq \frac{a+1}{0}$$

$$\text{Ex: } x=a \Rightarrow a^r + a^r + (m-r)a = 0$$

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

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

(15) ∞

$$(f(x) - rg(x))' = \left(\frac{r|x-r| - r|x-r| - r\sqrt{x}}{r\sqrt{x}^r} \right)' = \frac{\sqrt{r}}{r} x^{-\frac{r}{2}} = \frac{\sqrt{r}}{r}$$

$$f(x) = \frac{r|x-r|}{r\sqrt{x}^r}, g(x) = \frac{|x-r| + \sqrt{r}x}{r\sqrt{x}^r}$$

(16) ∞

$$y = \frac{r}{r} n + 1 \quad f(r) = a$$

$$f'(r) = \frac{r}{r}$$

(70)

(عزیز)

$$\left\{ \begin{array}{l} r b = r a \Rightarrow b = r a \\ r b a + C = r a r \end{array} \right.$$

سہ

(71)

$$\Rightarrow C = -r a r$$

$$\Rightarrow a^r + b - c = a^r + r a + r a r = (a+1)^r - 1$$

(عزیز)

$$x_{\max} = \frac{0 \times 1 + a \times \frac{r}{r}}{\frac{r}{r}} = \frac{r}{a} a$$

(72)

$$\sqrt{\frac{r}{r} a r} \times \frac{r}{a} a = 1 a = \frac{r}{r}$$

$$\Rightarrow \frac{r}{r} a r \times \frac{a^r}{a^r} = \frac{1}{r^r} \Rightarrow a^r = \frac{a^r}{r^r} = (r/a)^r$$

$$\Rightarrow a = r/a$$

(عزیز)

بہارِ دہلی کی آب و ہوا

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