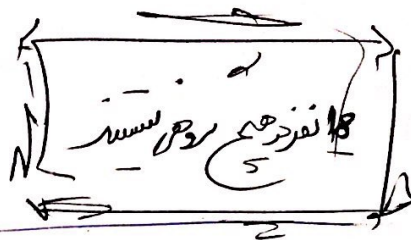
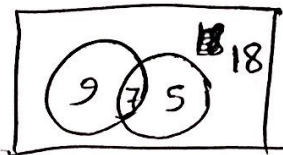


$$9 + x = 16 \rightarrow x = 7$$



$$A = \sqrt[5]{4 \sqrt[3]{16}} \left(\frac{1}{2}\right)^{-\frac{4}{3}} \rightarrow A = \sqrt[5]{\sqrt[3]{4 \times 4^2}} \times \left(\frac{1}{2}\right)^{-\frac{4}{3}}$$

$$\rightarrow A = \sqrt[5]{\sqrt[3]{4^3}} \times \left(\frac{1}{2}\right)^{-\frac{4}{3}} \rightarrow A = \sqrt[5]{4} \times \left(\frac{1}{2}\right)^{-\frac{4}{3}} \rightarrow A = 4^{\frac{1}{5}} \times 2^{\frac{4}{3}}$$

$$A = (2)^{\frac{2}{5}} \times 2^{\frac{4}{3}} \rightarrow A = 2^2 \rightarrow A = 4$$

$$(2A)^{-\frac{1}{3}} = \frac{1}{(2A)^{\frac{1}{3}}} = \frac{1}{\sqrt[3]{8}} = \frac{1}{2} = 0.5$$

سوال 103 - نقطه 103 حول بدنه $m = \frac{1}{2}$ مثله 2 تبیل بدنه 103

Konkur.in

$$y = -x^2 + 2x + 5 \xrightarrow{\text{3 واحد 3}} y = -(x-3)^2 + 2(x-3) + 5 \xrightarrow{\text{2 واحد 2}} (104)$$

$$y = -(x-3)^2 + 2(x-3) + 3 \xrightarrow{\text{باله 2 واحد 2}} -(x-3)^2 + 2(x-3) + 3 > x$$

$x = 3 \rightarrow$ نقطه 2 و 4 صفر \rightarrow نقطه 2 و 4 صفر
 $x = 4 \rightarrow$ نقطه 3 صفر \rightarrow نقطه 3 صفر
 با رد نرسه \rightarrow نرسه را

2/ $14, 21, \dots, 98$
 \downarrow \downarrow
 عدد اول عدد آخر

(105)

$$d = \frac{a_m - a_n}{m - n} \rightarrow 7 = \frac{98 - 14}{m - 1} \rightarrow m - 1 = 12 \rightarrow \boxed{m = 13}$$

$$S_{13} = \frac{13}{2} (2 \times 14 + 12 \times 7) = 728$$

$$\frac{1}{x} + \frac{1}{x+9} = \frac{1}{26} \rightarrow \frac{x + x + 9}{x(x+9)} = \frac{1}{26} \rightarrow x^2 + 9x = 26(2x+9)$$

(106)

$$\rightarrow x^2 + 9x = 40x + 180 \rightarrow x^2 - 31x + 180 = 0 \rightarrow (x+5)(x-36) = 0$$

$$\boxed{x = 36}$$

$$x = -5 \quad \text{ع. ق. ع. ق. ع.}$$

$$g \circ f^{-1} = \{(5, 3), (4, 1), (6, 2)\}$$

$$\frac{g}{g \circ f^{-1}} = \{(5, 2), (4, 2)\}$$

(107)

$$(1,0) \in f \rightarrow -2 + \left(\frac{1}{2}\right)^{A+B} = 0 \rightarrow 2 = \left(\frac{1}{2}\right)^{A+B} \rightarrow \boxed{A+B = -1} \quad \text{I}$$

(108)

$$(2,2) \in f \rightarrow -2 + \left(\frac{1}{2}\right)^{2A+B} = 2 \rightarrow 4 = \left(\frac{1}{2}\right)^{2A+B} \rightarrow \boxed{2A+B = -2} \quad \text{II}$$

$$\text{I, II} \rightarrow \begin{cases} \boxed{A = -1} \\ \boxed{B = 0} \end{cases} \rightarrow f(x) = -2 + \left(\frac{1}{2}\right)^{-x} \rightarrow f(3) = -2 + \left(\frac{1}{2}\right)^{-3} = -2 + \frac{8}{2} = \frac{6}{2}$$

$$\tan\left(\frac{11\pi}{4}\right) + \sin\left(\frac{15\pi}{4}\right) \cos\left(\frac{13\pi}{4}\right)$$

(109)

$$\begin{aligned} \tan\left(3\pi - \frac{\pi}{4}\right) + \sin\left(4\pi - \frac{\pi}{4}\right) \cos\left(3\pi + \frac{\pi}{4}\right) &= -\tan\left(\frac{\pi}{4}\right) + \sin\frac{\pi}{4} \cos\frac{\pi}{4} \\ &= -\tan\frac{\pi}{4} + \frac{1}{2} \sin\frac{\pi}{2} = -1 + \frac{1}{2} = -\frac{1}{2} \end{aligned}$$

$$\lim_{n \rightarrow 0} \frac{\sin(n+a) - \sin a}{n} = \frac{0}{0} \xrightarrow{\text{Hop}} \lim_{n \rightarrow 0} \frac{\cos(n+a)}{1} = \cos a$$

(110)

$$\lim_{x \rightarrow 2^+} \frac{3x-6}{x-\sqrt{x+2}} = \frac{0}{0} \xrightarrow{\text{Hop}} \lim_{x \rightarrow 2^+} \frac{3}{1 - \frac{1}{2\sqrt{x+2}}} = 4$$

(111)

$$\lim_{x \rightarrow 2^-} ax - 1 = 2a - 1$$

$$\begin{aligned} &\rightarrow 2a - 1 = 4 \rightarrow 2a = 5 \\ a = \frac{5}{2} &\rightarrow \boxed{a = 2.5} \end{aligned}$$

$$y = 1 + \frac{a}{2} \sin 2bx$$

دوره تناوبی $\rightarrow T = \pi \rightarrow \frac{2\pi}{|2b|} = \pi \rightarrow \boxed{b = \pm 1}$

بناوبه به نقطه حادتر برابر $\frac{3}{2}$ می باشد.

$$1 + \frac{a}{2} = \frac{3}{2} \rightarrow \frac{a}{2} = \frac{1}{2} \rightarrow \boxed{a = 1}$$

$$\boxed{a + b = 2}$$

و a و b هم علامت

$$\sin^3 x + \cos^3 x = 1 - \frac{1}{2} \sin 2x$$

↓
حقیقہ و لاغر

$$(\sin x + \cos x)(\sin^2 x + \cos^2 x - \sin x \cos x) = 1 - \frac{1}{2} \sin 2x$$

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

$$\left(1 - \frac{1}{2} \sin 2x\right)(\cos x + \sin x - 1) = 0$$

$$1 - \frac{1}{2} \sin 2x = 0 \rightarrow \sin 2x = 2 \quad \times$$

$$\sin x + \cos x = 1 \rightarrow \sqrt{2} \sin\left(x + \frac{\pi}{4}\right) = 1 \rightarrow \sin\left(x + \frac{\pi}{4}\right) = \frac{\sqrt{2}}{2}$$

$$\sin\left(x + \frac{\pi}{4}\right) = \sin\left(\frac{\pi}{4}\right) \rightarrow \begin{cases} x + \frac{\pi}{4} = 2k\pi + \frac{\pi}{4} \rightarrow \boxed{x = 2k\pi} \text{ (I)} \\ x + \frac{\pi}{4} = 2k\pi + \frac{3\pi}{4} \rightarrow \boxed{x = 2k\pi + \frac{\pi}{2}} \end{cases}$$

$$\left(\frac{\pi - \frac{\pi}{4}}{4}\right)$$

$$\text{(I)} \rightarrow 0, 2\pi$$

$$\text{(II)} \rightarrow \frac{\pi}{2} \rightarrow 0 + 2\pi + \frac{\pi}{2} = \frac{5\pi}{2}$$

$$\lim_{x \rightarrow 2} \frac{2x-5}{x^2+ax+b} = -\infty$$

مقام صفر + بسط غير صفر = -∞

$$(x-2)^2 = x^2 - 4x + 4 \rightarrow$$

$$a = -4 \quad b = 4$$

$$a+b=0$$

$$\lim_{x \rightarrow 2} \frac{f(x)-f(2)}{x-2} = \frac{4}{3}$$

$$x \rightarrow 2$$

$$\rightarrow (f \circ g)'(1) = ?$$

$$g(x) = x + \sqrt{x}$$

$$(f \circ g)'(1) = g'(1) \times f'(g(1)) = \frac{3}{2} \times \frac{4}{3} = \frac{2}{1}$$

$$g'(x) = 1 + \frac{1}{2\sqrt{x}} \rightarrow g'(1) = 1 + \frac{1}{2} = \frac{3}{2}$$

$$f'(2) = \frac{4}{3}$$

$$f(x) = \begin{cases} 2x - x^2 & x < 2 \\ \frac{1}{2}x^2 + ax + b & x \geq 2 \end{cases}$$

سوال 1
سوال 2
سوال 3

$$\lim_{x \rightarrow 2^-} f(x) = \lim_{x \rightarrow 2^+} f(x) = f(2)$$

$$0 = 2 + 2a + b \rightarrow \boxed{2a + b = -2}$$

سوال 4
سوال 5
سوال 6

$$x + a = 2 - 2x \xrightarrow{x=2} 2 + a = 2 - 4 \rightarrow \boxed{a = -4}$$

$$a + b = -4 + 6 = \underline{\underline{2}}$$

$$\boxed{b = 6}$$

سوال 1
سوال 2
سوال 3

$$\frac{f(2) - f(0)}{2 - 0} = \frac{12 - 2}{2} = \underline{\underline{5}}$$

سوال 4
سوال 5
سوال 6

$$f'(x) = (1 \times \sqrt{4x+1}) + \frac{4}{2\sqrt{4x+1}} \times (x+2)$$

$$f'\left(\frac{3}{4}\right) = (1 \times 2) + \frac{4}{2 \times 2} \times \left(\frac{11}{4}\right) = 2 + \frac{11}{4} = \underline{\underline{\frac{19}{4}}}$$

$$5 - \frac{19}{4} = \frac{1}{4} = \underline{\underline{0.25}}$$

$$P' \quad f(0)=0 \rightarrow \text{رابطہ نہیں} \rightarrow \boxed{C=0}$$

$$P' \quad f(1)=0 \rightarrow \text{محل افقی} \rightarrow 12 + 3a + 2b = 0 \rightarrow \boxed{3a + 2b = -12} \quad \text{I}$$

$$P'' \quad f(1)=0 \rightarrow \text{نقطہ اوج} \rightarrow 36 + 6a + 2b = 0 \rightarrow \boxed{6a + 2b = -36} \quad \text{II}$$

$$P' \quad f(x) = 12x^3 + 3ax^2 + 2bx + C$$

$$\boxed{a = -8}$$

$$P'' \quad f(x) = 36x^2 + 6ax + 2b$$

$$f'(x) = \frac{(2x+2)(x-1)^2 - 2(x-1)(x^2+2x)}{(x-1)^4} \rightarrow f'(x) = \frac{2(x+1)(x-1)^2 - 2(x-1)(x^2+2x)}{(x-1)^4}$$

$$f'(x) = \frac{2(x^2+1)(x-1) - 2(x-1)(x^2+2x)}{(x-1)^4} = \frac{2(x-1)(x^2-1-x^2-2x)}{(x-1)^4}$$

$$= \frac{2(x-1)(-2x-1)}{(x-1)^4} \rightarrow$$

$$x=1 \rightarrow$$

در طرفه چپ

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

حاصل نفع min

$$x=1 \rightarrow \int_{\text{جانب چپ}}$$

$$1 - \left(-\frac{1}{2}\right) = \frac{3}{2}$$

سایت کنکور

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