

تمليل کر : > کنز آرٹس جو سعنی

هندسی a, ar, ar^2

متوسط (1)

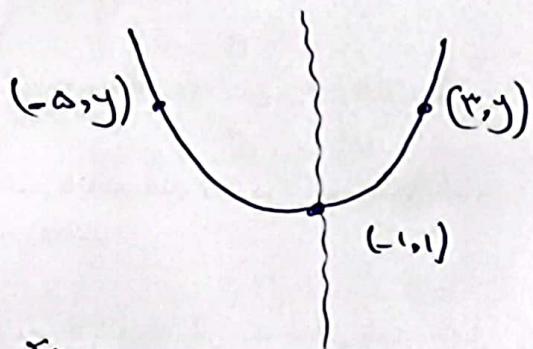
حسابی $\frac{a}{r}, \frac{ar}{r}, \frac{ar^2}{r}$ نصف کن

$$ar = \frac{a}{r} + \frac{ar^2}{r} \xrightarrow{\times r} r^2 = 1 + r^2 \rightarrow (r-1)^2 = 0$$

کنزینہ $r=1 \rightarrow a=0$

$$y = a(n+1)^2 + 1$$

متوسط وقت لیں



$$\Rightarrow y = an^2 + 2an + a + 1$$

$$\alpha + \beta = -2 = S$$

$$\alpha \cdot \beta = \frac{a+1}{a} = p$$

$$\alpha^2 + \beta^2 = \omega \Rightarrow S^2 - 2p = \omega$$

$$\leftarrow -\frac{2a+2}{a} = \omega$$

$$a = -\frac{2}{r} \rightarrow y = -\frac{r}{n} + 1 = \frac{1}{r}$$

$$\frac{1}{n^2} + \frac{1}{(1-n)^2} = \frac{14}{9} \Rightarrow \frac{(n-1)^2 + n^2}{n^2(n-1)^2} = \frac{14}{9}$$

متوسط وقت لیں (2)

ضمن $n^2 - n = t \Rightarrow \frac{t^2 + 1}{t^2} = \frac{14}{9} \Rightarrow 14t^2 - 18t - 9 = 0$

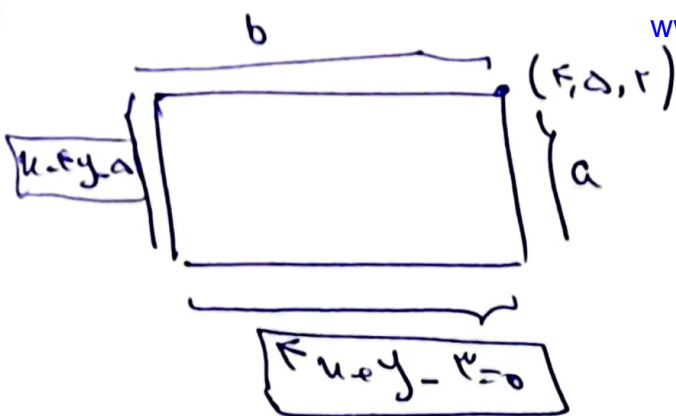
$$14t^2 - 4t - 1 = 0 \Rightarrow t^2 - 4t - 14 = 0 \Rightarrow (t-1)(t+5) = 0$$

ac سوئی

$$t = \frac{1}{14}, t = -\frac{5}{14}$$

$$t = \frac{n}{10}, t = \frac{-r}{14}$$

$$\begin{cases} n^2 - n - \frac{n}{10} = 0 \rightarrow S=1 \\ n^2 - n + \frac{r}{14} = 0 \rightarrow S=1 \end{cases} \quad (2)$$



$u - fy = a \rightarrow m = 1/f$ ✓

$fx + y = r \rightarrow m = -f$

حقیقین، سببہا

$a = \frac{17}{\sqrt{17}} \div 2 = \frac{17}{2\sqrt{17}}$

$b = \frac{1.5}{\sqrt{17}}$

خوب بود

$f(x) = \sqrt{x - 2\sqrt{mx} - 1}$

$y^{-1} = 12 - x$

$f^{-1}(x) = 10$

$f(1,1) = 2 \rightarrow 2 = \sqrt{1 - 2\sqrt{1 \cdot m} - 1} \Rightarrow 10m = 10 \Rightarrow m = 1$

$f(m+1) \xrightarrow{m=1} f(2) = 1$

$y = 12 - x$

$f(m+1) = ?$ خوب بود

$10 = 12 - x \Rightarrow x = 2$

$n_2 = n_1 \left(\frac{1}{9}\right)^{t/2} \Rightarrow \frac{1}{4} = \left(\frac{1}{9}\right)^t$

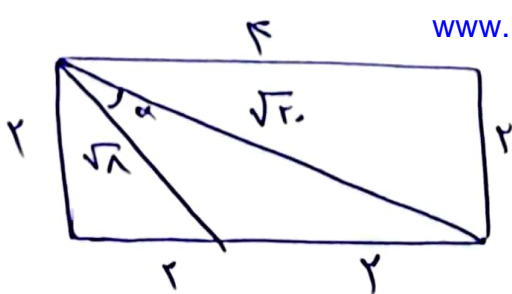
$\frac{1}{4} n_1$

$4 = \left(\frac{9}{1}\right)^t \Rightarrow \log_a 4 = t \log_a \frac{9}{1} + \log_a 1$

$\left. \begin{matrix} \log_a 4 = \frac{a}{12} \\ \log_a 4 = \frac{a}{v} \end{matrix} \right\} \Rightarrow \frac{a}{12} + \frac{a}{v} = t \left(\frac{10}{v} - \frac{10}{12} \right)$

$\Rightarrow t = \frac{19}{4} \times 40 = 190 \text{ min}$

۱ سال نام



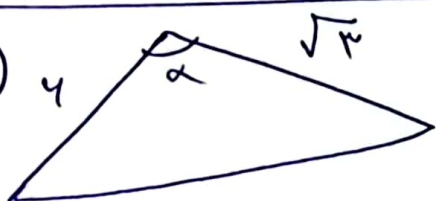
متوسط

10

$$S = \frac{1}{2} r \cdot r = \frac{1}{2} r^2 = \frac{1}{2} r \sqrt{r} \sin \alpha$$

$$\sin \alpha = \frac{1}{\sqrt{10}} \Rightarrow \text{triangle with hypotenuse } \sqrt{10}, \text{ side } 1 \Rightarrow \boxed{C + \alpha = 3}$$

مسائل



$$S = \frac{1}{2} b \cdot c \sin \alpha = \frac{1}{2} (4) \sqrt{3} \sin \alpha \quad (11)$$

$$\sin \alpha = \frac{\sqrt{3}}{4} \Rightarrow \boxed{\alpha = 40^\circ, 140^\circ}$$

دو جواب

متوسط و خوب 15

$$f(x) = a + \frac{b}{r} \underbrace{\sin(rx - \frac{rn}{r})}_{\cos(rx)}$$

$$f(x) = a + \frac{b}{r} \cos(rx)$$

$$f(x) = 1 - 2 \cos(rx)$$

$$T = \pi = \frac{rn}{rc} \Rightarrow \boxed{c=1}$$

$$\cos(x) = \frac{1}{2} \Rightarrow \begin{cases} rx = \frac{\pi}{3} \\ rx = 2\pi - \frac{\pi}{3} \end{cases}$$

$$\begin{cases} x = \frac{\pi}{6} \\ x = \frac{5\pi}{6} \end{cases} \Rightarrow \text{افضل } \rightarrow \boxed{\frac{2\pi}{3}}$$

$$\cos u - \sin u = t$$

$$t^2 = 1 - \sin^2 u$$

$$mt = 3\sqrt{4}(1-t^2) = \sqrt{4}$$

$$\Rightarrow \boxed{3\sqrt{4}t^2 + mt - \sqrt{4} = 0} \Rightarrow 2\sqrt{4} + m\sqrt{\frac{2}{3}} - 4\sqrt{4} = 0$$

$$\Rightarrow m = 4$$

$$\cos\left(u + \frac{\pi}{4}\right) = \frac{1}{\sqrt{3}}$$

$$\cos u \cos \frac{\pi}{4} - \sin u \sin \frac{\pi}{4} = \frac{1}{\sqrt{3}} \Rightarrow \cos u - \sin u = \sqrt{\frac{2}{3}} = t$$

فردی $f \rightarrow f(m^2 - m - 5) < f(-3 + 2m - m^2)$ ۱۴

متوسط

$$m^2 - m - 5 > -3 + 2m - m^2$$

$$2m^2 - 3m - 2 > 0 \Rightarrow$$

	$-\frac{1}{2}$	2
	+	-
	+	+
	اجزای	جابجایی

بد مقدار صحیح $m = 1$

قابل قبول نیست

دکتر آرثر یوسفی 09158007212

$$\lim_{x \rightarrow -\infty} \frac{f(x)}{g(x)} = \lim_{x \rightarrow +\infty} \frac{g^{-1}(x)}{f^{-1}(x)}$$

$$f(x) = \frac{ax+b}{cx+d} \quad (15)$$

$$g(x) = \frac{cx+d}{ax+b}$$

$$g^{-1}(x) = \frac{-b+cx}{ax-c}$$

$$\frac{\frac{a}{c}}{-b/a} = \frac{-b}{a} \cdot \frac{c}{a}$$

$$a^2 = b^2 \Rightarrow a = \pm b$$

$$\lim_{x \rightarrow +\infty} f^{-1}(x) = \frac{-b}{a} = \pm 1$$

نژندہ

متوسط و ابتدا، سی

$$n \rightarrow n^+ \Rightarrow |n - (-n-1)| = |2n+1| = 2n+1 \quad (14)$$

$$n^- \Rightarrow x - (n-1) + k = k+1 \quad k = 2n$$

$$(-n)^+ \Rightarrow |n - (n-1)| = |1| = 1 \quad k+1 = 2n-1$$

$$(-n)^- \Rightarrow n - (n-1) + k = k+1$$

زوج می تواند باشد

فرد می تواند باشد

متوسط و ابتدا، سی

نژندہ

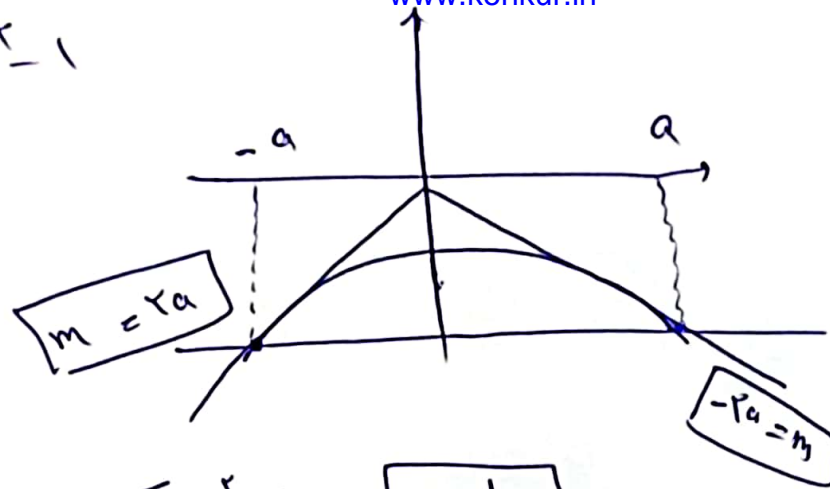
$$\lim_{x \rightarrow 0} \frac{f(x)-1}{x} \Rightarrow \lim_{x \rightarrow 0} g(x) = f(0) \quad \text{متوسط} \quad (17)$$

$$f(x) = \left(\frac{-1+5}{1+5} \right)^2 = 2 \left(\frac{2c}{(1+5)^2} \right) \left(\frac{-1+5}{1+5} \right) = -4$$

نژندہ

دکتر آرشد یوسفی 09158007212

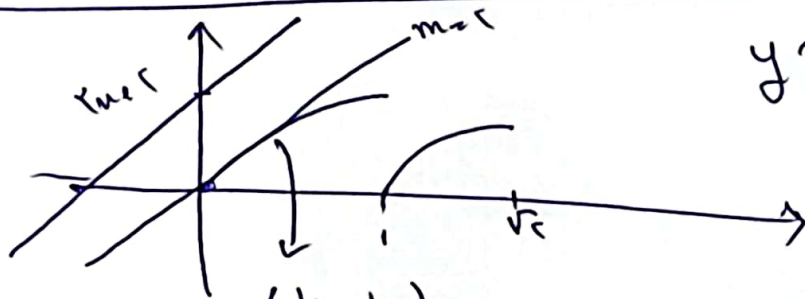
$$y = -u^2 - 1$$



14
کرنند

$$-ra^2 - 1 = 0 \Rightarrow a = \frac{1}{r}$$

$$y = -\frac{1}{r^2}$$



$$y' = \frac{1}{2\sqrt{u}} = r$$

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$$\sqrt{u} = \frac{1}{2r}$$

$$u = \frac{1}{4r^2}$$

$$d = \frac{\frac{1}{4r^2} - \frac{1}{4r} - r}{\sqrt{\Delta}}$$

$$= \frac{\frac{1}{4} - \frac{1}{4} - r}{\sqrt{\Delta}} = \frac{-r}{\sqrt{\Delta}}$$

کرنند

کرنند