

مهندس محمد حمیدی

مؤلف کتاب ریاضی جامع هندسه از ۲ تا ۱۲ کلاس

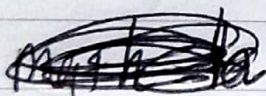
طراح ریاضی هم از کلاس اول تا کلاس دوازدهم

مدرس برتر ریاضی

ارشد ارشد (هندسه) تاریخ تشریحی نکلور در درس ریاضی

مدرس برداری

مدرس رتبه های برتر



Instagram: math - hamidi

09147133687

$$A = \sqrt[7]{27 \sqrt[3]{243}} \left(\frac{1}{3}\right)^{-\frac{7}{3}} \quad \text{L}^{\text{r}} \text{D}$$

$$A = \sqrt[7]{27 \times 3^{\frac{5}{3}}} \times \left(+\frac{1}{3}\right)^{-\frac{7}{3}}$$

$$A = \sqrt[7]{3 \times 3^{\frac{5}{3}}} \times (3^{-1})^{-\frac{7}{3}}$$

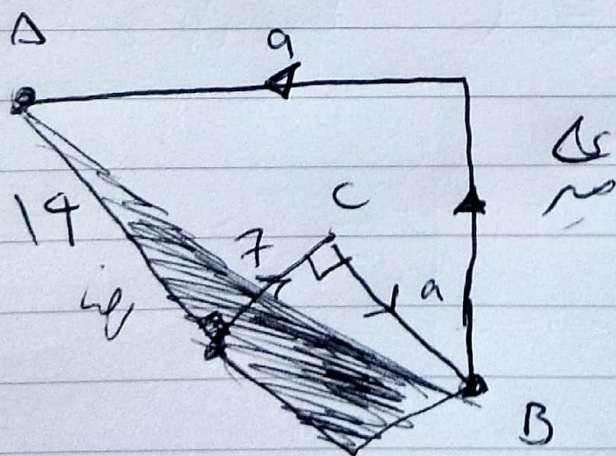
$$A = \sqrt[7]{3^{3+\frac{5}{3}}} \times 3^{\frac{7}{3}} = \sqrt[7]{3^{\frac{14}{3}}} \times 3^{\frac{7}{3}}$$

$$3 = \frac{14}{3} \times 3 = 3^{\frac{2}{3}} \times 3^{\frac{7}{3}} = 3^3 = 27$$

$$(A + \omega)^{-\frac{1}{5}} = (27 + 5)^{-\frac{1}{5}} = 32^{-\frac{1}{5}}$$

$$(2^5)^{-\frac{1}{5}} = 2^{-1} = \frac{1}{2} \checkmark$$

2) ②



$$AB^2 = 7^2 + 32^2 = 578$$

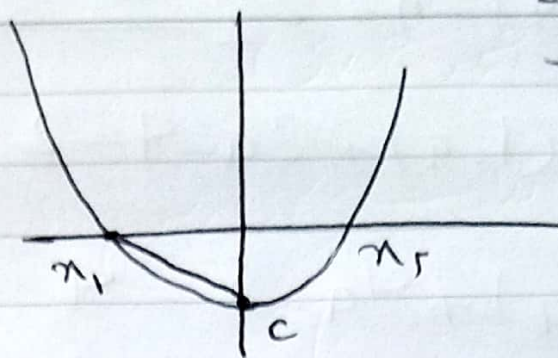
$$\text{قطر} = \sqrt{578} = 17\sqrt{2}$$

$$a\sqrt{2} = 17\sqrt{2} \Rightarrow a = 17 \checkmark$$

Date

No

$$S_{\Delta} = \frac{|m_1| \times |c|}{r}$$



9) (3)

$$\frac{|m_1| \times |c|}{r} = |c|^r$$

$$\Rightarrow \frac{|m_1| \times |c|}{r} = |c|^r \Rightarrow \frac{|m_1|}{r} = |c|$$

$$|m_1| = r|c|$$

$$\begin{cases} x_1 = 4c \\ x_2 = -2c \end{cases} \Rightarrow (4c)^2 + 5(2c) + c = 0 \Rightarrow 4c^2 + 11c = 0$$

$$\hookrightarrow c = 0$$

$$c = -2/75 \quad \checkmark$$

$$\hookrightarrow (-2c)^2 + 5(-2c) + c = 0$$

$$4c^2 - 9c = 0 \Rightarrow \begin{cases} c = 0 \\ c = 9/4 = 2,25 \quad \checkmark \end{cases}$$

$$3x - 2y = b$$

(4)

$$\Rightarrow -2y = -3x + b \Rightarrow y = \frac{3}{2}x - \frac{b}{2}$$

$$m = \frac{3}{2}$$

$$\frac{3}{2}(2) + h = 2a - 1 \Rightarrow 3 + h = 2a - 1 \Rightarrow h = 2a - 4$$

$$f(2) = 2a - 1$$

$$\frac{3}{2}(1-a) + h = 2 \quad \xrightarrow{h=2a-4}$$

$$\frac{3}{2}(1-a) + 2a - 4 = 2 \quad \xrightarrow{\times 2}$$

$$3(1-a) + 4a - 8 = 4$$

$$3 - 3a + 4a - 8 = 4 \Rightarrow \underline{a=9}$$

$$h = 2a - 4 = 2 \times 9 - 4 = 14$$

$$f(m) = \frac{3}{2}m + 14 \Rightarrow f(-6) = \frac{3}{2}(\overline{-6}) + 14$$

$$f(-6) = -9 + 14 = 5$$

$$(2n^2 - 7n + 1, -2) \quad \text{⑤}$$

$$(m^2 - 4m + 6, nf(n)) = (m^2 - 4m + 6, 2n)$$

$$2n^2 - 7n + 1 = -2 \Rightarrow 2n^2 - 7n + 3 = 0$$

$$n = \frac{7 \pm 5}{4} \Rightarrow \begin{cases} n=3 \quad \checkmark \\ n=2/4 = 1/2 \quad \times \end{cases} \quad \Delta = 25$$

Date

$$\lfloor \frac{m}{5} \rfloor = 3 \quad \text{for } m \in \mathbb{Z}$$

$$m^2 - 4m + 6 = 2n \quad n \leq 3$$

$$m^2 - 4m + 6 = 6 \Rightarrow m^2 - 4m = 0 \quad \left. \begin{array}{l} m=0 \quad \times \\ m=4 \quad \checkmark \end{array} \right\}$$

$$\left\lfloor \frac{m}{5} \right\rfloor = \left\lfloor \frac{4 \times 3}{5} \right\rfloor = \left\lfloor 2.4 \right\rfloor = 2$$

~~f(x)~~

4, 6

$$f(m) = \lfloor m \rfloor + \lfloor -m \rfloor$$

$$\text{Domain: } -3 \leq m \leq 3$$

g

$$\frac{g}{f} \Rightarrow f \neq 0$$

سرد نقاط صیغ این تابع
تعریف نمی شود

$$f(m) = (1-2m)x - \frac{2m+3}{2} \xrightarrow{m=0}$$

7

$$f(m) = (1-0)x - \frac{0+3}{2} = x - \frac{3}{2}$$

$$f(m) = (1-2m)x - \frac{2m+3}{2} \quad \underline{\underline{m=1}}$$

$$f(m) = (1-2)x - \frac{4+3}{2} = -x - \frac{5}{2}$$

$$y = -x - \frac{5}{2} \quad \& \quad y = x - \frac{3}{2}$$

$$x - \frac{3}{2} = -x - \frac{5}{2} \rightarrow 2x = -1$$

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

$$y = -\frac{1}{2} - \frac{3}{2} = -2$$

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

$\left(-\frac{1}{2}, -2\right)$
 α, β

~~$$ax^2 + bx + c = 0 \quad \Delta > 0$$~~

~~$$px^2 + qx + r = 0 \quad \Delta > 0$$~~

40

$$x^2 - 9x - 1 = 0 \Rightarrow S = 9$$

5 (8)

$$ax^2 - 4x + a + 2 = 0 \rightarrow p = \frac{a+2}{a}$$

$$S = p \Rightarrow a = \frac{a+2}{a} \Rightarrow \begin{cases} a = 2 & \times \\ a = -1 & \end{cases}$$

$$x^2 - 2x - 1 = 0 \quad \Delta > 0 \quad \checkmark$$

$$2x^2 - 4x + 4 = 0 \quad \times$$

$$a = -1 \Rightarrow \begin{cases} x^2 + x - 1 = 0 & \Delta > 0 \quad \checkmark \\ -x^2 - 4x + 1 = 0 & \Delta > 0 \quad \checkmark \end{cases}$$

Date

$$y = x^2 + 3x - 3$$

$$x_5 = \frac{-3}{2} = -1.5$$

2) 9

$$\text{ارسل : } \frac{200}{x}$$

$$\text{شاور : } \frac{200}{x-20}$$

$$\text{شاور} - \text{ارسل} = \frac{5}{6} \Rightarrow \frac{200}{x-20} - \frac{200}{x} = \frac{5}{6}$$

$$\frac{40}{x-20} - \frac{40}{x} = \frac{1}{6} \quad \times (x-20)6x$$

$$6x(x-20) \frac{40}{x-20} - 6x(x-20) \frac{40}{x} = 6x(x-20) \frac{1}{6}$$

$$240x - 240(x-20) = x(x-20)$$

$$240x - 240x + 4800 = x^2 - 20x$$

$$x^2 - 20x - 4800 = 0$$

$$(x-80)(x+60) = 0 \quad \left\{ \begin{array}{l} x=80 \checkmark \\ x=-60 \end{array} \right.$$

$$\frac{x}{x-20} = \frac{80}{80-20} = \frac{80}{60} = \frac{4}{3}$$

$$8, 8, 10, 10, \textcircled{13}, 9, 6, c, d \textcircled{10}$$

$\underbrace{\quad\quad\quad}_{Q_1} \quad \quad \quad \underbrace{\quad\quad\quad}_{Q_2} \quad \quad \quad \underbrace{\quad\quad\quad}_{Q_3}$

$$\frac{8+8+10+10}{4} = 9$$

$$\frac{6+8+10+10}{4} = \cancel{8} 8,5 \checkmark$$

$$(13 - \bar{x})^2 = 25 \quad \left\{ \begin{array}{l} 13 - \bar{x} = 5 \Rightarrow \bar{x} = 8 \\ 13 - \bar{x} = -5 \Rightarrow \bar{x} = 18 \end{array} \right. \quad \textcircled{11}$$

$$(6 - \bar{x})^2 = 4 \quad \left\{ \begin{array}{l} 6 - \bar{x} = 2 \Rightarrow \bar{x} = 4 \\ 6 - \bar{x} = -2 \Rightarrow \bar{x} = 8 \end{array} \right.$$

$$\bar{x} = 8 \quad \text{--- اختر هذا ---}$$

$$\frac{13+9+4+6}{4} = 8 \Rightarrow \frac{9+23}{4} = 8$$

$$a + 23 = 36 \Rightarrow \textcircled{a = 9}$$

$$S^2 = \frac{2(13-8)^2 + (9-8)^2 + (4-8)^2 + (6-8)^2}{4} = \frac{46}{4} = 11,5 \checkmark$$

Date _____ No _____

$$a - b = 0 \quad \text{یا} \quad a = b \quad \text{ہوگا} \quad (12)$$

دو اعداد 5، 6 میں برابر ہونے پر $a - b = 0$ ہوتا ہے۔

$$(1) T \wedge T = T \quad \alpha \quad (2) F \wedge F = F \quad \checkmark \quad 3 \quad (13)$$

$$(1) F \vee T = T \quad \alpha \quad (2) T \vee F = T \quad \alpha$$

$$A + B = 1500 \Rightarrow$$

$$\frac{B}{1500} \quad \text{ترتیب سے}$$

(14)

$$\frac{B - n}{1500}$$

$$\frac{B}{1500} - \frac{B - n}{1500} = \frac{5}{100}$$

$$\Rightarrow \frac{B - B + n}{1500} = \frac{5}{100} \Rightarrow \frac{n}{1500} = \frac{5}{100} \Rightarrow n = 75$$

$$\frac{B - n}{B} = \frac{80}{100} \Rightarrow \frac{B - 75}{B} = \frac{4}{5}$$

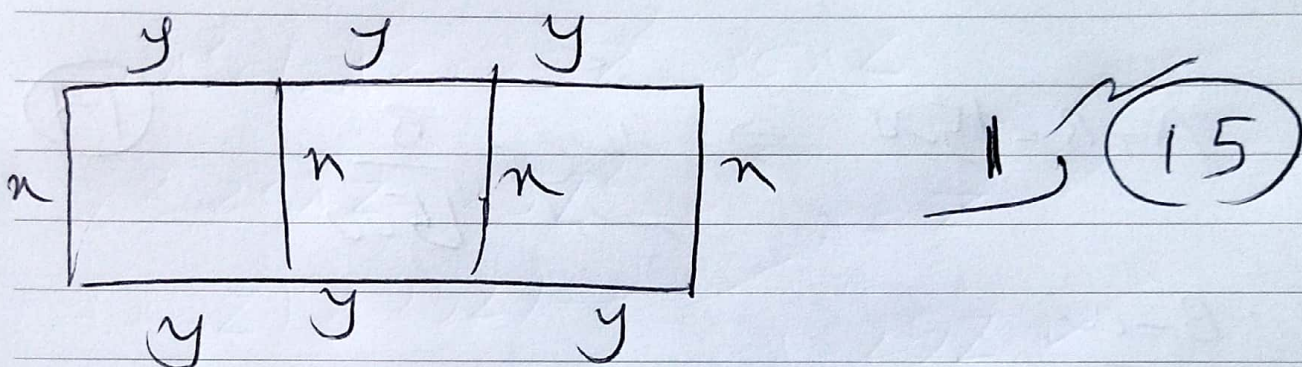
$$B = 375$$

$$B - n = 375 - 75 = 300 \quad \checkmark$$

$$\frac{\text{تبخ سگار اریه}}{\text{ناتوم}} = \frac{1}{3} \Rightarrow \frac{300-m}{375} = \frac{1}{3}$$

$$\frac{300-m}{375} = \frac{1}{3} \Rightarrow 300-m = 125$$

$$m = 175$$



$$6y + 4x = 190 \Rightarrow 3y + 2x = 95$$

عزله خورل = مستقیم

$$(3y(x)) = (95 - 2x)(x) = 95x - 2x^2$$

$$95 - 2x > 0 \Rightarrow 2x < 95 \Rightarrow x < 47,5$$

$$0 < x < 47,5$$

Date

$$4 \times 3 \times 1 \times 3 = 36$$

$$3 \left. \begin{array}{l} \\ \end{array} \right\} \textcircled{16}$$

$$4 \times 3 \times 2 \times 2 = 48$$

$$36 + 48 = 84$$

$$n(S) = \binom{7}{5} = \frac{7 \times 6}{2} = 21$$

$$\left. \begin{array}{l} \\ \end{array} \right\} \textcircled{17}$$

$$n_{b_1, b_2} \binom{5}{4} = 5$$

$$n_{b_1, b_2, b_3} \binom{5}{4} = 5$$

$$n_{b_1, b_2, b_3} \binom{5}{5} = 1$$

$$P(A) = \frac{n(A)}{n(S)}$$

$$P(A) = \frac{5+5+1}{21} = \frac{11}{21}$$

$$n=2 \Rightarrow a_3 = \frac{9}{2 - \binom{2}{2}} + \frac{9}{2 - \binom{2}{3}} = 9 + 9 = 2$$

$$2 \left. \begin{array}{l} \\ \end{array} \right\} \textcircled{18}$$

$$n=3 \Rightarrow a_4 = \frac{9}{3 - \binom{3}{2}} + \frac{9}{3 - \binom{3}{3}} = 9 + 9 = 2$$

$$n=4 \Rightarrow a_2 + a_3 = 1 + 2 = 3$$

$$n=5 \Rightarrow a_3 + a_4 = 2 + 2 = 4$$

$$n=6 \Rightarrow a_3 + a_4 = 2 + 2 = 4$$

$$n=7 \Rightarrow a_4 + a_5 = 2 + 3 = 5$$

$$n=8 \Rightarrow a_4 + a_6 = 2 + 4 = 6 \checkmark$$

$$(5 \text{ مہی}) \rightarrow (19)$$

$$y^2 = xz$$

$$\frac{a+c}{r} = b$$

$$3y = \frac{x+5z}{2} \xrightarrow{\times \frac{1}{3}} y = \frac{x+5z}{6}$$

$$y^2 = \frac{(x+5z)^2}{36}$$

$$\Rightarrow x^2 + 10xz + 25z^2 = 36xz$$

$$x^2 - 26xz + 25z^2 = 0 \quad x = z \quad \times$$

$$(x-z)(x-25z) = 0 \quad \left\{ \begin{array}{l} x = z \quad \times \\ x = 25z \quad \checkmark \end{array} \right.$$

$$\left[\frac{x}{z} \right] = \left[\frac{25z}{z} \right] = [25] = 25 \quad \checkmark$$

$$(0, 1) \text{ \& } (1, 0)$$

20

$$f(1) = 0 \Rightarrow 4^{1a-b} + k = 0 \Rightarrow 4^{2a-b} = k$$

$$f(0) = 2 \Rightarrow 4^{-b} + k = 2 \Rightarrow 4^{-b} = 2 - k$$

میں سے $k = -2$ فرس

$$4^{2a-b} = 2$$

$$4^{-b} = 4 \Rightarrow -b = 1 \Rightarrow b = -1$$

$$bk = (-1) \times (-2) = 2 \quad \checkmark$$

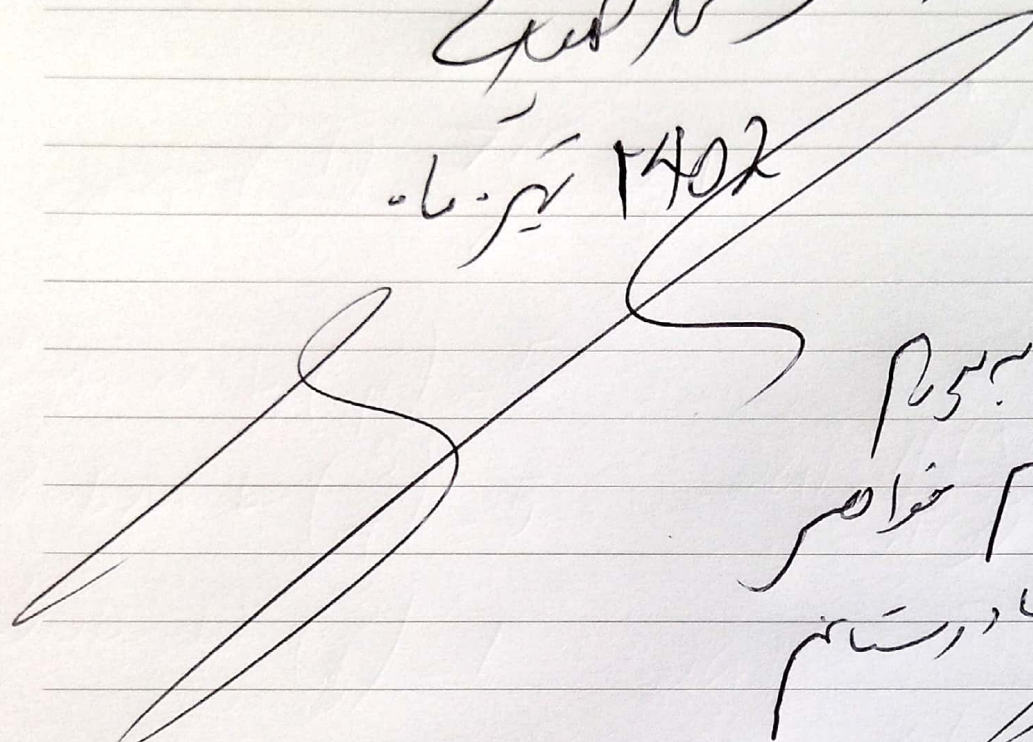
Date

No

لیونستہ دولت آباد، سرسبز ضلع

گھنٹہ سر محمد علی

۱۴۵۲ بیرونہ



سید احمد بیرونہ

ماہنامہ خواہر

دیہی اور شہری

دیہی و شہری ہاگ سرسبز ضلع