

$$q_q = q_1 + \Delta d = \frac{p}{r} + \Delta \left(\frac{v}{r} \right) = \frac{\omega q}{r} = 1 \text{ kg} \cdot \text{m/s}$$

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$$a = 1, 3, 5, 7, 9$$

a. $\{., 1, 3, 5, 7, 9\}$

$$(1, p) \in f \rightarrow 1 + 4 + a + 1 = p \rightarrow a = 14$$

$$\log_{\frac{1}{p}} x = r^{\frac{1}{1-p}} = r$$

$$x_1 + x_2 = -\frac{b}{a} \cdot \frac{r}{r} \quad \frac{b}{a} \cdot -\frac{r}{r}$$

$$\Delta k^r = r\omega \rightarrow k^r \cdot q = \left[\frac{k^r}{p} \right] = \left[\frac{q}{p} \right] = 1$$

$$|OA| = \sqrt{2} = 2\sqrt{5}$$

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

$$\tan(\pi - \alpha) = \frac{\sqrt{y}}{y} \rightarrow \tan \alpha = -\frac{\sqrt{y}}{y}$$

$$\begin{aligned} & \lim_{x \rightarrow \frac{\pi}{2}} \cos x + \lim_{x \rightarrow \frac{\pi}{2}} \left(\sin \left(x - \frac{\pi}{2} \right) \right) \xrightarrow{x = \frac{\pi}{2}} \cos \frac{\pi}{2} + \lim_{x \rightarrow \frac{\pi}{2}} \left(\sin \left(-\frac{\pi}{2} \right) \right) \\ & = \lim_{x \rightarrow \frac{\pi}{2}} \left(\frac{1}{x} \right) - \lim_{x \rightarrow \frac{\pi}{2}} \left(\frac{1}{x} \right) = 1, \infty - 1 = -\infty \end{aligned}$$

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

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$$\begin{aligned} & 1 - \lim_{x \rightarrow \frac{\pi}{2}} \sin x + \lim_{x \rightarrow \frac{\pi}{2}} \sin x = 0 \\ & \sin x = 1 \rightarrow \sin x = 1 \rightarrow x = \frac{\pi}{2} + 2k\pi \rightarrow \frac{f(k\pi + \frac{\pi}{2})}{g(k\pi + \frac{\pi}{2})} \\ & \sin x = -1 \rightarrow \sin x = -1 \rightarrow x = \frac{3\pi}{2} + 2k\pi \rightarrow \frac{f(k\pi + \frac{3\pi}{2})}{g(k\pi + \frac{3\pi}{2})} \\ & \begin{array}{c|ccccc} k & -2 & -1 & 0 & 1 \\ \hline x & -\frac{7\pi}{2} & -\frac{5\pi}{2} & -\frac{3\pi}{2} & -\frac{\pi}{2} \end{array} \rightarrow \text{مجموع} = -\frac{1}{2} \\ & \left[-\frac{7\pi}{2}, \frac{\pi}{2} \right] \end{aligned}$$

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$$\begin{aligned} & \lim_{x \rightarrow 2^+} \frac{x-2}{x^2-4} \xrightarrow{H.P} \frac{1}{2x} = \frac{1}{4} \\ & \lim_{x \rightarrow 2^-} \frac{x-2}{x^2-4} = \frac{0}{0} = 0 \end{aligned}$$

$$\begin{aligned} f-g &= \frac{n+3-\varepsilon}{(n+1)(n+3)} = \frac{x+1}{(x+1)(x+3)} = \frac{1}{x+3} \\ & A: \text{مجموع} \end{aligned}$$

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$$\begin{aligned} & f(x) = b \sin \left(\frac{x}{a} \right) \\ & \lim_{x \rightarrow a^+} f(x) = 1 - \lim_{x \rightarrow a^+} a^x \\ & \lim_{x \rightarrow a^-} f(x) = a - 1 \end{aligned}$$

$$-\frac{1}{x} = b \sin \left(\frac{x}{a} \right) - b \sin \left(\frac{1}{x} \right) \rightarrow \text{Telegram: @konkur_in}$$

$$\begin{aligned} & \left(\frac{1}{g} \right)' \cdot (g(u))' = 0 \\ & (x+1-x)' = 0 \end{aligned}$$

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$$\begin{aligned} & |f| \leq 1 \rightarrow 1-m \leq 1 \rightarrow 0 \leq m \\ & ad-bc \leq 0 \rightarrow m^2 - m - 2 \leq 0 \\ & \frac{-1 \pm \sqrt{1+8}}{2} = -1 \leq m \leq 2 \end{aligned}$$

$$n \rightarrow 0 \leq m \leq 2$$

$$m \rightarrow g \cdot \frac{r}{x-1} \rightarrow \text{Graph}$$

$$m \neq 2 \rightarrow m \in \{0, 1\}$$

فرض سوال

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$$\begin{aligned} & ba+c = \frac{1}{a} \text{ برعکس} \\ & f_+(a) = f_-(a) \rightarrow \frac{-1}{a^2} = b - ba^2 = -1 \\ & ba+c = \frac{1}{a} \rightarrow \frac{ba^2}{-1} + ac = 1 \rightarrow a \leq -2 \end{aligned}$$

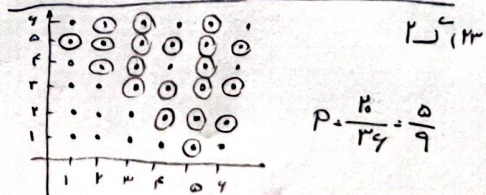
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$$\begin{aligned} & x = -\frac{b}{a} \rightarrow -1 = -\frac{a}{3} - a = 3 \\ & \lim_{x \rightarrow \infty} -f = -1 + 3 - b - 1 = b = 5 \end{aligned}$$

۱-۲۲



$$\begin{aligned} & ({}^3_1) + ({}^3_2)x^2! + ({}^3_3)x^3! \\ & 3 + 9 + 9 = 18 \end{aligned}$$



$$P = \frac{h}{r_g} = \frac{5}{9}$$

$$\left. \begin{array}{l} x_1, x_2, x_3, x_4 \\ y_1, y_2, y_3, y_4 \end{array} \right\} \bar{x} = \bar{y} \rightarrow \frac{x_1 + x_2 + x_3 + x_4}{4} = \frac{y_1 + y_2 + y_3 + y_4}{4}$$

$$\left. \begin{array}{l} y_1, x_2, x_3, x_4 \\ x_1, y_2, y_3, y_4 \end{array} \right\} \bar{x} = \bar{y} \rightarrow \frac{y_1 + x_2 + x_3 + x_4}{4} = \frac{x_1 + y_2 + y_3 + y_4}{4}$$

$$\rightarrow \frac{x_1 - y_1}{4} = \frac{y_1 - x_1}{4}$$

$$x_1 - y_1 = y_1 - x_1$$

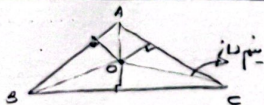
$$2x_1 = 2y_1$$

$$x_1 = y_1$$

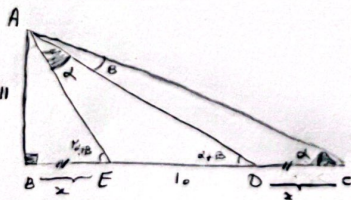
$\delta^2 = 1, 25$

معدل $\frac{3}{5}$ $\frac{4}{10}$
 معدل $\frac{1}{5}$ $\frac{1}{10}$

$PCA | \text{معدل} = \frac{\frac{3}{5} \times \frac{4}{10} + \frac{1}{5} \times \frac{1}{10}}{(\frac{3}{5} \times \frac{4}{10}) + (\frac{1}{5} \times \frac{1}{10})} = \frac{12}{17} = \frac{9}{17}$



$3 \rightarrow 17$



$2 \rightarrow 17$

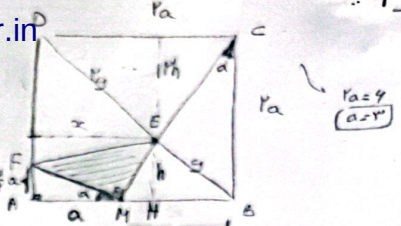
$\Delta ABC, \tan A = \frac{11}{1 \cdot \sqrt{2}}$

$\Delta ABD, \tan(A+B) = \frac{11}{x+1}$

$\Delta ABE, \tan(B+A) = \frac{11}{x} \rightarrow \frac{11}{x} = \frac{\frac{11}{1+\sqrt{2}} + \frac{11}{x+1}}{1 - (\frac{11}{1+\sqrt{2}})(\frac{11}{x+1})}$

$\frac{11}{x} = \frac{11(\sqrt{2}+1)}{\sqrt{2}^2 + \sqrt{2} - 11} \rightarrow \sqrt{2}^2 + \sqrt{2} - 11 = x^2 - 1 \cdot x + 11$

$(\sqrt{2}-1)(\sqrt{2}+1) = x^2 - x + 12$

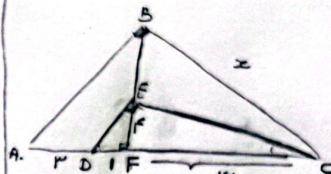


$Ph \cdot h = Pa - Ph \cdot Pa \rightarrow h = \frac{Pa}{P}$
 $\frac{Pa}{P} = \frac{x}{Pa} \rightarrow x = \frac{Pa}{P} \rightarrow MH = \frac{1}{P} a$

$ME = \sqrt{\frac{1}{9} a^2 + \frac{1}{9} a^2} = \frac{\sqrt{2} a}{3}$

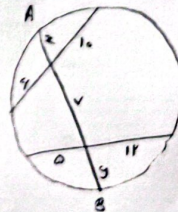
$FM = \sqrt{\frac{1}{9} a^2 + a^2} = \frac{\sqrt{10} a}{3}$

$S = \frac{1}{P} ME \times FM = \frac{1}{P} \times \frac{a^2}{9} = \frac{1}{P} \times \frac{a^2 \times 9}{9} = \frac{10}{P} = \frac{10}{17} = \frac{10}{17}$



$(EF)^2 = DF \times FC \rightarrow 14 = 1 \times FC \rightarrow FC = 14$

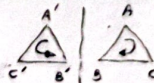
$(BC)^2 = FC \times AC \rightarrow x^2 = 14 \times 10 \rightarrow x = \sqrt{140}$
 $(x = 11.83)$



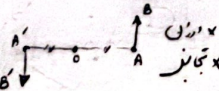
$(x+v)y = 40 \rightarrow 2x + 4y = 40$
 $x(v+y) = 40 \rightarrow 2x + 4y = 40$
 $(y = 10)$

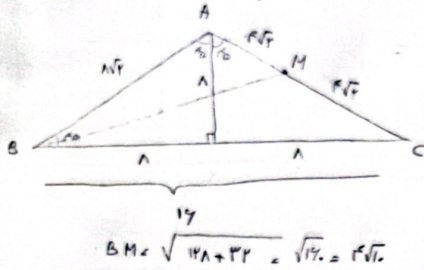
$x^2 + vx = 40$
 $(2+11)(x-10) = 0$
 $(x = 10)$

$AB = v + vx = 14$



$3 \rightarrow 17$





$$A \begin{pmatrix} 0 & 3 \\ -4 & -1 \end{pmatrix} + \begin{pmatrix} -3 & -3 \\ 4 & -2 \end{pmatrix} B \quad \text{ر. ۳۳}$$

$$A \begin{pmatrix} -3 & 0 \\ 0 & -3 \end{pmatrix} B = -3AB = \begin{pmatrix} -9 & -4 \\ -3 & -1 \end{pmatrix}$$

ضرب در -۱ عنصر قطر اصلی $= -4x - \frac{3}{y} = 9$

$$A^T \begin{bmatrix} 1 & 1 & -1 \\ 0 & 2 & 0 \\ -2 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 & 1 & -1 \\ 0 & 2 & 0 \\ -2 & 1 & 1 \end{bmatrix} \quad \text{ر. ۳۴}$$

$$A^T = \begin{bmatrix} 3 & 2 & -2 \\ 0 & 2 & 0 \\ -2 & 1 & 1 \end{bmatrix}$$

$$A^T = A^T A = \begin{bmatrix} 3 & 2 & -2 \\ 0 & 2 & 0 \\ -2 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 & 1 & -1 \\ 0 & 2 & 0 \\ -2 & 1 & 1 \end{bmatrix}$$

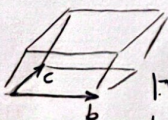
$$A^T = \begin{bmatrix} -1 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 1 & 1 \end{bmatrix}$$

$$r_c = 9 \rightarrow c = 3$$

$$e = \frac{c}{a} = \frac{r}{a} = \frac{1}{p} \rightarrow a = 9$$

$$\begin{aligned} a^2 &= b^2 + c^2 \\ 81 &= b^2 + 9 \\ b^2 &= 72 \\ b &= 6\sqrt{2} \end{aligned}$$

ضرب قطر کوچک $= 2b = 12\sqrt{2}$



$$V = |a \cdot (b \times c)|$$

$$b \times c = \begin{vmatrix} 1 & 2 & 1 \\ 1 & 1 & 1 \end{vmatrix} = (1, 1, -1)$$

$$|V| = |14 - 1 - 14| = 2$$

$$h = \frac{V}{|b \times c|} = \frac{2}{\sqrt{2}} = \sqrt{2}$$

$$\begin{aligned} n=0 & \rightarrow \sqrt{0} = 0 \quad \checkmark \\ n=1 & \rightarrow \sqrt{1} = 1 \quad \checkmark \\ n=2 & \rightarrow \sqrt{4} = 2 \quad \times \end{aligned}$$

$$\begin{aligned} 99999 & \rightarrow \sqrt{99999} = 316 \quad \checkmark \\ 1000 & \rightarrow \sqrt{1000} = 31 \quad \checkmark \end{aligned}$$

$$1 \text{ عدد } \rightarrow \boxed{1 \dots} \quad \checkmark$$

تجزیه اعداد

$$1, 2 \rightarrow x + (1 + 0 - 2)(1) = 1 \rightarrow -x + 1 = 1 \rightarrow x = 0$$

$$2, 3 \rightarrow x + (0 - 2)(3) = 2 \rightarrow -x + 6 = 2 \rightarrow x = 4$$

$$3, 4 \rightarrow x + (0 - 2)(4) = 3 \rightarrow -x + 8 = 3 \rightarrow x = 5$$

$$4, 5 \rightarrow x + (0 - 2)(5) = 4 \rightarrow -x + 10 = 4 \rightarrow x = 6$$

$$5, 6 \rightarrow x + (0 - 2)(6) = 5 \rightarrow -x + 12 = 5 \rightarrow x = 7$$

$$6, 7 \rightarrow x + (0 - 2)(7) = 6 \rightarrow -x + 14 = 6 \rightarrow x = 8$$

$$7, 8 \rightarrow x + (0 - 2)(8) = 7 \rightarrow -x + 16 = 7 \rightarrow x = 9$$

$$8, 9 \rightarrow x + (0 - 2)(9) = 8 \rightarrow -x + 18 = 8 \rightarrow x = 10$$

$$55555, 10000$$

$$54555$$

$$55455$$

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$$55554$$

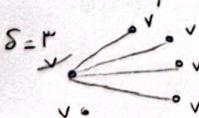
$$d = (6, 7, 8, 9) = (r_1, r_2, r_3, r_4) = 37$$

$$\sqrt{37} = 1$$

$$\{3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199, 211, 223, 227, 229, 233, 239, 241, 251, 257, 263, 269, 271, 277, 281, 283, 293, 307, 311, 313, 317, 331, 337, 347, 349, 353, 359, 367, 373, 379, 383, 389, 397, 401, 409, 419, 421, 431, 433, 439, 443, 449, 457, 461, 463, 467, 479, 487, 491, 499, 503, 509, 521, 523, 527, 539, 541, 547, 557, 563, 569, 571, 577, 587, 593, 599, 601, 607, 613, 617, 619, 623, 629, 631, 637, 641, 643, 647, 653, 659, 661, 667, 671, 673, 677, 683, 687, 691, 697, 701, 709, 713, 719, 727, 733, 739, 743, 751, 757, 761, 769, 773, 787, 797, 809, 811, 823, 827, 829, 833, 839, 843, 853, 857, 859, 863, 869, 877, 881, 883, 887, 893, 897, 907, 911, 913, 917, 919, 923, 929, 937, 941, 943, 947, 953, 959, 967, 971, 973, 977, 983, 989, 993, 997, 1000\}$$

$$V + 1 = 8$$

$$P = 8 \rightarrow q = \frac{8 \times 7}{2} = 28 - 24 = 4$$



$$\boxed{8 = 3}$$