

18, 25

سؤال 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 45 - 46 - 47 - 48 - 49 - 50 - 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 - 59 - 60 - 61 - 62 - 63 - 64 - 65 - 66 - 67 - 68 - 69 - 70 - 71 - 72 - 73 - 74 - 75 - 76 - 77 - 78 - 79 - 80 - 81 - 82 - 83 - 84 - 85 - 86 - 87 - 88 - 89 - 90 - 91 - 92 - 93 - 94 - 95 - 96 - 97 - 98 - 99 - 100

(2)

$$A(-2, k) \quad B(\varepsilon, m) \quad m_{AB} = -\frac{1}{k} \\ m = \frac{\Delta y}{\Delta x} = \frac{m-k}{\varepsilon-(-2)} = \frac{m-k}{\varepsilon+2} = -\frac{1}{k} \quad m-k = -\frac{\varepsilon+2}{k} \quad m = k - \frac{\varepsilon+2}{k}$$

$$d = \sqrt{(m-k)^2 + (\varepsilon+2)^2} = \sqrt{\left(-\frac{\varepsilon+2}{k}\right)^2 + (\varepsilon+2)^2} = \sqrt{\frac{(\varepsilon+2)^2}{k^2} + (\varepsilon+2)^2} = \sqrt{(\varepsilon+2)^2 \left(\frac{1}{k^2} + 1\right)} = (\varepsilon+2) \sqrt{1 + \frac{1}{k^2}} = 2\sqrt{5}$$

$$S = d^2 = (2\sqrt{5})^2 = 20 \quad \checkmark$$

$$A(-1, \varepsilon) \quad B(1, 1) \quad C(m, y) \quad D(-1-x, y+1)$$

(2) سؤال 25

$$AB = \sqrt{(m-k)^2 + (\varepsilon+2)^2} = \sqrt{(1-(-1))^2 + (1-\varepsilon)^2} = \sqrt{4 + (\varepsilon-1)^2} = \sqrt{1 + \varepsilon^2} = \sqrt{5} = \omega \quad \checkmark \\ m_{AB} = \frac{\Delta y}{\Delta x} = \frac{1-\varepsilon}{1-(-1)} = \frac{1-\varepsilon}{2} = -\frac{k}{k} \quad \checkmark$$

$$m_{AB} \times m_{CD} = -1 \Rightarrow m_{CD} = \frac{1}{k} \Rightarrow \frac{\Delta y}{\Delta x} = \frac{1}{k} \Rightarrow \frac{y+1-y}{(-1-x)-(-1)} = \frac{1}{k} \Rightarrow \frac{1}{-x} = \frac{1}{k} \Rightarrow -x = k \Rightarrow x = -k \\ \rightarrow -1-x-\varepsilon = 9 \Rightarrow -1-k-\varepsilon = 9 \Rightarrow -k-\varepsilon = 10 \Rightarrow k = -\varepsilon-10 \\ x = -k = \varepsilon+10$$

$$DC = \sqrt{(\Delta x)^2 + (\Delta y)^2} = \sqrt{(-x-(-1))^2 + (1-y)^2} = \sqrt{(-x+1)^2 + (1-y)^2} = \sqrt{\left(\frac{1}{k}\right)^2 + (1)^2} = \sqrt{\frac{1}{k^2} + 1} = \sqrt{\frac{1 + k^2}{k^2}} = \frac{\sqrt{1+k^2}}{k} \\ \Rightarrow DC = \sqrt{\frac{11}{16} + \frac{144}{16}} = \sqrt{\frac{155}{16}} = \frac{\sqrt{155}}{4} = \frac{10}{k}$$

$$d = \sqrt{AB^2 + DC^2} = \sqrt{5 + \frac{100}{k^2}} = 1 + \frac{10}{k} = \frac{k+10}{k} = \frac{10}{k} \quad \checkmark$$

جواب صفحہ آخر

$$2mx + (m^2-1)y = k$$

$$\Rightarrow (m^2-1)y = -2mx + k \Rightarrow y = \frac{-2m}{m^2-1}x + \frac{k}{m^2-1}$$

$$|a_m|_0 = \sqrt{k} \Rightarrow \frac{-2m}{m^2-1} = \sqrt{k} \rightarrow \sqrt{k}m^2 - \sqrt{k} = -2m \rightarrow \sqrt{k}m^2 + 2m - \sqrt{k} = 0$$

$$\rightarrow \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{(2)^2 - 4(\sqrt{k})(-\sqrt{k})}}{|\sqrt{k}|} = \frac{\sqrt{4 + 4k}}{\sqrt{k}} = \frac{\sqrt{4(1+k)}}{\sqrt{k}} = \frac{2\sqrt{1+k}}{\sqrt{k}} = \frac{2\sqrt{k}}{k} = \frac{2}{\sqrt{k}} \quad \checkmark$$

$$A(1, 9) \quad B(3, 3) \quad C(7, 11)$$

(4) سؤال 24

$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{11-3}{7-3} = \frac{8}{4} = 2 \quad 2(x-3) = (y-3) \Rightarrow 2x-6 = y-3 \Rightarrow 2x-y-3 = 0$$

$$d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|2(1) - 3(9) - 3|}{\sqrt{2^2 + (-1)^2}} = \frac{|2 - 27 - 3|}{\sqrt{5}} = \frac{|-28|}{\sqrt{5}} = \frac{28}{\sqrt{5}} = 2\sqrt{5} \quad \checkmark$$

سوال ٦

$$AB: y + 2x = 5$$

$$AC: 3y - 2x = 14$$

$$BC: 2y - 5x = -19$$

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$$\begin{cases} y + 2x = 5 \\ 3y - 2x = 14 \end{cases} \xrightarrow{x(1)} \begin{cases} y + 2x = 5 \\ 3y - 2x = 14 \end{cases} \xrightarrow{+} \begin{cases} y + 2x = 5 \\ 4y = 19 \end{cases}$$

$$y + 2(1) = 5 \rightarrow y = 3$$

$$A(1, 3)$$

$$\begin{cases} y + 2x = 5 \\ 2y - 5x = -19 \end{cases} \xrightarrow{x(2)} \begin{cases} y + 2x = 5 \\ 2y - 5x = -19 \end{cases} \xrightarrow{+} \begin{cases} y + 2x = 5 \\ -11x = -23 \end{cases}$$

$$y + 2(2) = 5 \rightarrow y = 1$$

$$B(2, 1)$$

$$\begin{cases} 3y - 2x = 14 \\ 2y - 5x = -19 \end{cases} \xrightarrow{x(3)} \begin{cases} 3y - 2x = 14 \\ 2y - 5x = -19 \end{cases} \xrightarrow{+} \begin{cases} 3y - 2x = 14 \\ 4y - 9x = 11 \end{cases}$$

$$3y - 2(3) = 14 \rightarrow 3y = 20 \rightarrow y = \frac{20}{3}$$

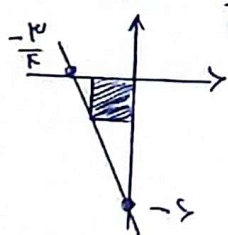
$$C(3, \frac{20}{3})$$

$$m_{AC} = \frac{\Delta y}{\Delta x} = \frac{20 - 3}{3 - 1} = \frac{17}{2}$$

$$\frac{17}{2}(x - 1) = (y - 3) \rightarrow \frac{17}{2}x - \frac{17}{2} = y - 3 \rightarrow \frac{17}{2}x - y = \frac{11}{2}$$

$$d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|\frac{17}{2}(3) - 20 + \frac{11}{2}|}{\sqrt{(\frac{17}{2})^2 + 1}} = \frac{|\frac{51}{2} - 20 + \frac{11}{2}|}{\sqrt{\frac{289}{4} + 1}} = \frac{|\frac{51 + 11 - 40}{2}|}{\sqrt{\frac{293}{4}}} = \frac{21}{\sqrt{293}}$$

$$m = \frac{\Delta y}{\Delta x} = -\frac{2}{17} \Rightarrow y = -\frac{2}{17}x - 4$$

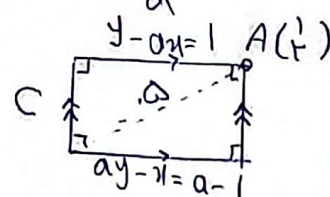


$$-17m - 4 = x \Rightarrow -17(-\frac{2}{17}) - 4 = x \Rightarrow 2 - 4 = x \Rightarrow x = -2$$

$$d = \sqrt{1^2 + 2^2} = \sqrt{5}$$

سوال ٩

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سوال ١٧

$$y - ax = 1$$

$$ay - x = a - 1$$

$$y = ax + 1$$

$$y = \frac{x}{a} + \frac{a-1}{a}$$

$$y = x + 1$$

$$y = x$$

$$\frac{1}{1} = \frac{1}{\frac{1}{a}} \neq \frac{1}{\frac{a-1}{a}} \Rightarrow \frac{1}{1} = \frac{a}{a-1} \Rightarrow a = 1$$

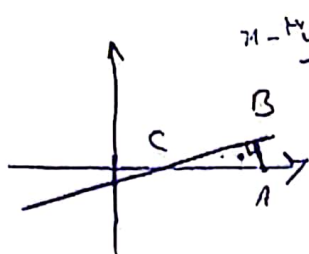
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$$A(1, 1) \rightarrow (1) - (1) + 1 = 1 \Rightarrow C^r + d^r = \omega^r$$

$$d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|1 - 1|}{\sqrt{1^2 + 1^2}} = \frac{0}{\sqrt{2}} = 0$$

$$\left(\frac{1}{\sqrt{2}}\right)^2 + a^2 = \omega^2 \Rightarrow a^2 = \frac{\omega^2}{2} - \frac{1}{2} = \frac{\omega^2 - 1}{2} \Rightarrow a = \frac{\sqrt{\omega^2 - 1}}{\sqrt{2}}$$

$$S = \frac{1}{\sqrt{2}} \times \frac{\sqrt{\omega^2 - 1}}{\sqrt{2}} = \frac{\sqrt{\omega^2 - 1}}{2}$$



$71 - 3y - 1 = 0 \rightarrow y = \frac{1}{3}x - \frac{1}{3}$ (دال ۱)
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 تقاطع خط با محور ها پابند.

$$AB_2 = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|k - 1|}{\sqrt{1}} = \frac{1}{\sqrt{1}}$$

$$\Rightarrow m_B \rightarrow -1 \rightarrow -1(1-\varepsilon) = y \rightarrow -1x + 1 = y$$

فاصلہ ۱۲۰

$$-K_{11} + K_{12} = \frac{1}{K} x - \frac{1}{K} \quad \frac{K_V}{K} = \frac{1}{K} x \Rightarrow x = \frac{K_V}{1} \Rightarrow y_{\text{soil}} \Rightarrow$$

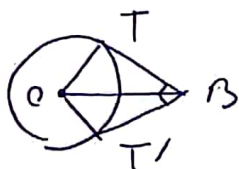
$$y = \frac{1}{\mu} x = \frac{1}{\mu} \Rightarrow \begin{matrix} x=1 \\ y=\frac{1}{\mu} \end{matrix}$$

$$S = \frac{0.19 \times 10^4}{\gamma} = 1/100 \checkmark$$

$$(-\frac{1}{\mu}, b), (-\frac{1}{\mu}, a) \quad \sqrt{3} = \frac{a-b}{(-\frac{1}{\mu}) - (-\frac{1}{\mu})} \Rightarrow \frac{a-b}{-\frac{1}{\mu}} = \sqrt{3} \Rightarrow b-a = \frac{\sqrt{3}}{5} \quad (\text{سوال 9})$$

$$q = \sqrt{\sin^2 \theta + \cos^2 \theta} = \sqrt{\left(-\frac{1}{\mu} - \left(-\frac{1}{\mu}\right)\right)^2 + (b-a)^2} = \sqrt{\frac{1}{\mu^2} + \frac{\mu}{\mu^2}} = \sqrt{\frac{1}{\mu^2} + \frac{1}{\mu}} = \frac{1}{\mu} \sqrt{1 + \mu}$$

طول قطر $= \sqrt{2} a = \sqrt{2} \times \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{\sqrt{2}}$ ✓



$$m(OT) = \frac{0 - (-\varepsilon)}{0 - (-\mu)} = \frac{\varepsilon}{\mu}$$

$$m(\phi_T)_{\lambda} m(\phi_T')_{\lambda-1} \Rightarrow m(\phi_T) = \frac{-1}{\epsilon}$$

$$\omega_T = \omega_{T'} = \gamma = \omega$$

$$m(OT') = -\frac{r}{k} \Rightarrow y = -\frac{r}{k}x + b \xrightarrow{(0,0)} b=0 \Rightarrow y = -\frac{r}{k}x$$

①, ② $\rightarrow O_T' = \sqrt{\frac{1}{13}} \pi^T = \left| \frac{Q}{\Sigma} u \right| = \omega \Rightarrow u = -\xi$

$$T'(u, \frac{1}{\epsilon} x)$$

$$\begin{matrix} T'(-\epsilon, \kappa) \\ T(-\kappa, -\epsilon) \end{matrix} \Rightarrow \begin{matrix} \text{قطر هاسفیف} \\ \text{در سطح} \end{matrix} \Rightarrow \kappa T + \kappa T' = \eta_C + \eta_B \Rightarrow -V = 0 + \eta_B$$

$u_B = -V$

$$y_T + y_T = y_C + y_B \Rightarrow -1 = 0 + y_B \quad y_B = -1 \checkmark$$

$$x_{B3} y_{B3} = -v x - 1 = \overline{v} \quad \checkmark$$

$$m_{CD} = m_{AB} = -\frac{r}{k} \rightarrow \frac{r}{-1 - r^2} = -\frac{r}{k} \rightarrow r = \frac{r}{r}$$

✓

$$m_{AB} \times m_{BC} = -1 \rightarrow -\frac{r}{k} \times \frac{y-1}{-\frac{r}{r}} = -1 \rightarrow y = -1$$

$$|AB| = \sqrt{14 + 9} = 5$$

$$\rightarrow p = 15$$

$$|BC| = \sqrt{\frac{9}{k} + k} = \frac{5}{r}$$