یازدهم بیر B

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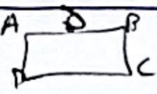
تکلیف ۱۷

$A\Big|{}^{-2}_{k} \quad B\Big|{}^{4}_{m} \quad \frac{m-k}{6} = -\frac{1}{2} \to -6 = 2m-2k \to m-k=-3 \to m=k-3$

$\sqrt{(m-k)^2+36}^{\,2} = \cancel{\dots}^2 \to (m-k)^2+36 \Rightarrow m=k-3 \to (k-3-k)^2 \to 9+36=45$

$A\Big|{}^{-1}_{4} \quad C\Big|{}^{x}_{y} \quad D\Big|{}^{-1-x}_{y+3} \quad B\Big|{}^{3}_{1}$



$x_A+x_C = x_B+x_D \Rightarrow y_A+y_C = y_B+y_D$

$-1+x = 3-1-x \to 2x=3 \to x=\frac{3}{2}$

$4+y = 1+y+3 \to y+4=y+4$

$m_{AB} = \frac{\Delta y}{\Delta x} = \frac{1-4}{3+1} = -\frac{3}{4} \qquad \sqrt{(1-4)^2+(3+1)^2} \to \sqrt{25}=5$

$m_{AD} = \frac{\Delta y}{\Delta x} = \frac{4-y-3}{-1+1+x} \to \frac{1-y}{x} \qquad \frac{1-y}{\frac{3}{2}} \times -\frac{3}{4} = -1$

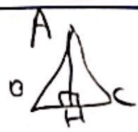
$\to \frac{4}{3} = \frac{3-3y}{3} \to 2-3y=4 \to -\frac{2}{3}=y \quad y=-1$

$\sqrt{(4-y-3)^2+(-1+1+x)^2} = \frac{5}{2} \qquad \frac{5}{2}+5 \to 15 = 15$

$2mx+(m^2-1)y=3 \to -\frac{a}{b} \to -\frac{2m}{m^2-1} = \tan 60 = \sqrt{3} \to \sqrt{3}m^2+2m-\sqrt{3}=0$

$m^2+2m-3=0 \;(m+3)(m-1) \to -\frac{3}{\sqrt{3}} \to -\sqrt{3} \quad \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

$\frac{\sqrt{3}}{3} - (-\sqrt{3}) \to \frac{\sqrt{3}}{3} + \frac{3\sqrt{3}}{3} \to 4\frac{\sqrt{3}}{3}$

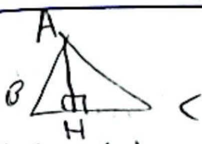


$A\Big|{}^{1}_{9} \quad B\Big|{}^{3}_{3} \quad C\Big|{}^{7}_{11}$

$BC \to \frac{\Delta y}{\Delta x} \to \frac{11-3}{7-3} \to \frac{8}{4} = 2 \to y-3 = 2(x-3) \to y=2x-3$

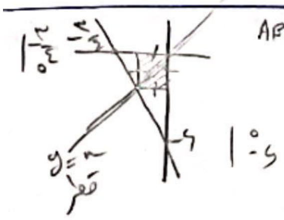
$\frac{|1(9)-2(1)+3|}{\sqrt{4+1}} = \frac{10}{\sqrt{5}} \Rightarrow \frac{10\sqrt{5}}{5} \to 2\sqrt{5}$

$AB = y+3x=7 \quad AC = 4y-3x=17 \quad BC = 2y-7x=-19$



$\begin{cases} 4y+3x=7 \\ 4y-3x=17 \end{cases} \to \cancel{-4y}-12x=-28 \quad -11x=-11 \to x=1 \to y=5 \;\Big|{}^{1}_{5}$

$\frac{|2(5)-7(1)+19|}{\sqrt{49+4}} = \frac{22}{\sqrt{53}}$



$\Big|{}^{-\frac{3}{4}}_{0} \qquad \Big|{}^{0}_{-6}$

$AB \to \frac{\Delta y}{\Delta x} \to \frac{-6-0}{0+\frac{3}{4}} = -6\times\frac{4}{3} = -8 \to y+6 = -8(x-0) \to y=-8x-6$

$y=-8x-6 = y=x \to -8x-6=x \to -9x=6 \to x=-\frac{6}{9}=-\frac{2}{3} \to y=-\frac{2}{3}$

$\sqrt{(-\frac{2}{3}-0)^2+(-\frac{2}{3}-0)^2} \to \sqrt{\frac{4}{9}+\frac{4}{9}} \to \sqrt{\frac{8}{9}} \to \frac{\sqrt{8}}{3}$

$y-ax=1 \quad ay-x=a-1$

$a=\frac{1}{a} \to a^2=1 \to a=\pm1 \to -1 \to y+x=1 \xrightarrow{(1,2)} 1+2\neq1$

$y+x=2 \to 1+2\neq2$

$\Rightarrow 1=a \to y-x=1, \; y-x=0 \to y=x \to \frac{|1-0|}{\sqrt{1+1}}$

$\frac{|0+1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}} \leftarrow 2\cdot5 = x^2+\frac{1}{2} \leftarrow x^2=\frac{49}{2} \quad x=\frac{7}{\sqrt{2}}$

$\frac{7}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{7}{2} = 3/5$

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$A\,|\,\begin{smallmatrix}4\\5\end{smallmatrix}$ $\quad x-3y=1$

طول ضلع → $\dfrac{|1(4)-3(5)-1|}{\sqrt{1+9}} = \dfrac{3}{\sqrt{10}} \to \dfrac{3\sqrt{10}}{10} = AH \to S = \dfrac{1}{2}\times\dfrac{3}{\sqrt{10}}\times\dfrac{3}{\sqrt{10}} \to \dfrac{1}{2}\times\dfrac{9}{10} = \boxed{\dfrac{9}{20}}$

جواب آخر

$\left|\begin{smallmatrix}4\\ \frac{1}{2}\end{smallmatrix}\right.$ ~~برقرار~~

$\left|\begin{smallmatrix}-\frac{1}{2}\\ a\end{smallmatrix}\right. \quad \left|\begin{smallmatrix}-\frac{1}{3}\\ 6\end{smallmatrix}\right.$

$\Delta y = 6-a$

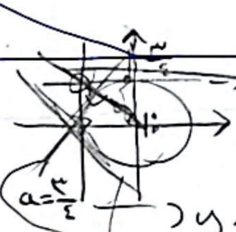
$\Delta x = -\frac{1}{3}+\frac{1}{2} = \frac{1}{6}$

$\dfrac{\Delta y}{\Delta x} = \sqrt{3} \to 6-a = \dfrac{\sqrt{3}}{6} \to (6-a)^2 = \left(\dfrac{\sqrt{3}}{6}\right)^2 = \dfrac{3}{36} = \dfrac{1}{12}$

$\to \sqrt{\Delta x^2+\Delta y^2} \to \sqrt{\frac{1}{36}+\frac{1}{12}} \to \sqrt{\frac{4}{36}} \to \sqrt{\frac{1}{9}} \to \frac{1}{3} \to \frac{1}{3}\times\sqrt{2} \to \dfrac{\sqrt{2}}{3}$

1

$\left|\begin{smallmatrix}-3\\-4\end{smallmatrix}\right.$ $\quad L$



$\to y = -\frac{3}{4}x \qquad \sqrt{x^2+\frac{9}{16}x^2} = 5$

$a = \frac{3}{4} \to y = \frac{3}{4}x$

$\sqrt{(-4-0)^2+(-3-0)^2} = 5$

$x^2+y^2 = 25$

$x^2+\frac{9}{16}x^2 = 25 \to x \to 4$ ✗, -4 ✓ $\to \left|\begin{smallmatrix}-4\\3\end{smallmatrix}\right.$

$\to y = \frac{4}{3}x+\frac{25}{3} \to 3y = 4x+25$

$\to y = -\frac{3}{4}x-\frac{25}{4} \to 4y = -3x-25$

$y_1 = y_2$

$\to -\frac{3}{4}x-\frac{25}{4} = \frac{4}{3}x+\frac{25}{4}$

$\to -\frac{8}{3}x = \frac{50}{4} \to x = -7 \to y = -1$

$\left|\begin{smallmatrix}-7\\-1\end{smallmatrix}\right.$

$x\times y \to -7\times -1 = 7$