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نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۷... کلاس:

(Egm) $\rightarrow m = \frac{m-k}{y} = -\frac{1}{y} \rightarrow m-k = -\frac{y}{y}$
 (-y, k) $\rightarrow m = \frac{m-k}{y} = -\frac{1}{y} \rightarrow m-k = -\frac{y}{y}$

$AB = \sqrt{(x_B - x_A)^2 + (y_B - y_A)^2} = \sqrt{4^2 + \left(\frac{m-k}{-1/y}\right)^2} \rightarrow AB = \sqrt{4 + \frac{(m-k)^2}{y^2}}$ (Ea)

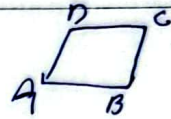
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$m_{AB} = -\frac{y}{x} \xrightarrow{m_{BC}} \frac{+x}{y} \rightarrow \frac{y-1}{x-1} = \frac{x}{y} \rightarrow y-1 = \frac{x^2}{y} \rightarrow y^2 - y = x^2$

$M_{AC} = \left(-\frac{1+m}{y}, \frac{x+y}{y}\right), M_{BD} = \left(\frac{y-m}{y}, \frac{y+x}{y}\right) \rightarrow \frac{-1+m}{y} = \frac{y-m}{y} \rightarrow m = \frac{y}{y} = 1$

$AB = \sqrt{4^2 + 1^2} = 5, BC = \frac{5}{y} \rightarrow P = 2 \times \left(\frac{5}{y} + 5\right)$ (Ea)



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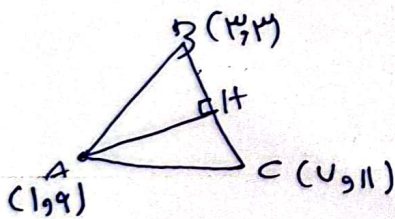
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$m = \sqrt{3} \rightarrow \frac{-ym}{m^2-1} = \sqrt{3} \rightarrow \sqrt{3}m^2 - \sqrt{3} + ym = 0$
 $m^2 + ym - 3 = 0 \rightarrow m = \frac{-y \pm \sqrt{y^2 + 12}}{2}$

$\frac{1}{\sqrt{3}} - \left(\frac{-y}{\sqrt{3}}\right) = \frac{x}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{x\sqrt{3}}{\sqrt{3}}$

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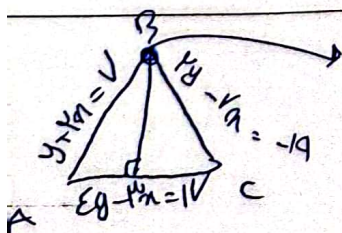
$m_{BC} = 2 \rightarrow \frac{y-3}{x-4} = 2 \rightarrow y-3 = 2x-8 \rightarrow y = 2x-5$

$\frac{|-2(1)+9+3|}{\sqrt{(-2)^2+1}} = \frac{1}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} = \frac{\sqrt{5}}{\sqrt{5}}$ (Ea)

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BC از A جدا



$B \text{ از } AC \text{ جدا} \rightarrow \frac{|2(3)-4(1)+1|}{\sqrt{2^2+(-4)^2}} = \frac{1}{\sqrt{20}} \times \frac{\sqrt{20}}{\sqrt{20}} = \frac{\sqrt{20}}{\sqrt{20}}$

$\frac{|2(1)-4(3)+1|}{\sqrt{2^2+(-4)^2}} = \frac{1}{\sqrt{20}} \times \frac{\sqrt{20}}{\sqrt{20}} = \frac{\sqrt{20}}{\sqrt{20}}$

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$$m = \frac{-4 - 0}{0 + \frac{\sqrt{3}}{2}} = -\sqrt{3}$$

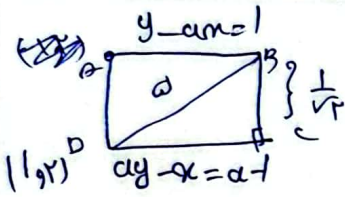
عوضه $\frac{1}{\sqrt{3}} \rightarrow \frac{1}{\sqrt{3}}$

$$y + 4 = -1(x + 0) \rightarrow y + 1x + 4 = 0$$

$$-x + 1x + 4 = 0 \rightarrow x = -4$$

$$\frac{L}{\sqrt{3}} + \frac{\sqrt{3}P}{\sqrt{3}}$$

$$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}P}{\sqrt{3}}$$



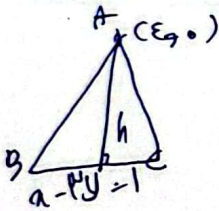
$$a: \text{Cathetus } a = \frac{1}{a} \rightarrow a^2 = 1 \rightarrow a = \pm 1 \rightarrow 1: 1-1+1 = 0$$

$$\rightarrow a = 1 \rightarrow y = x + 1$$

$$y = x + 1 \rightarrow \frac{1}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

$$\frac{1}{\sqrt{2}} \sim \left(\frac{1}{\sqrt{2}}\right)^2 + x^2 = a^2 \rightarrow x = \frac{1}{\sqrt{2}}$$

$$S = \frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{1}{2}$$



$$h = \frac{|x_2 - y_2|}{\sqrt{1 + (-1)^2}} = \frac{1}{\sqrt{2}} \rightarrow S = \frac{1}{2} \times d \times d = \frac{1}{2} \times \frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{1}{4}$$

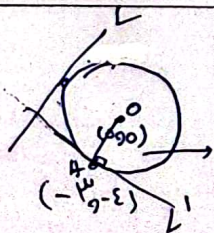
$$B \text{ side } \rightarrow B \text{ max} = \sqrt{1^2 + 1^2} = \sqrt{2} = \frac{1}{\sqrt{2}}$$

$$S_{\text{max}} = \frac{1}{2} \times \frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{1}{4}$$



$$m = \sqrt{3} \rightarrow \frac{a-b}{-\frac{1}{b} + \frac{1}{a}} = \sqrt{3} \rightarrow a-b = \frac{\sqrt{3}}{2}$$

$$\text{diagonal} = \sqrt{(a-b)^2 + \left(-\frac{1}{b} + \frac{1}{a}\right)^2} = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2} \rightarrow \frac{L}{\sqrt{3}} = \frac{\sqrt{3}P}{\sqrt{3}}$$



$$L: y = \frac{1}{\sqrt{3}}x + b$$

$$L' \rightarrow y = \frac{1}{\sqrt{3}}x + b$$

$$\frac{|x_0 - y_0 + c|}{\sqrt{1 + 1}} = d \rightarrow \frac{1}{2} = d \rightarrow c = \pm \sqrt{3}$$

$$\begin{aligned} 3x - 4y + 12 &= 0 \\ 4x + 3y - 12 &= 0 \end{aligned} \rightarrow \begin{aligned} x &= -1 \\ y &= -1 \end{aligned}$$