

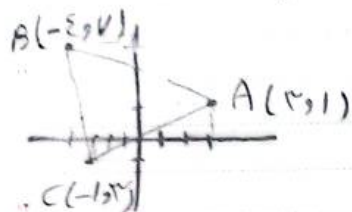
$$m\pi = \frac{\pi + 2}{2} = 2$$

$$m\gamma = \frac{1 - \gamma}{2} = 1$$

$$a = \frac{y_A - y_B}{x_A - x_B} = \frac{1 - 2}{4 - 1} = -\frac{1}{3} \rightarrow m = -\frac{1}{3} \rightarrow y = -\frac{1}{3}x + \frac{7}{3}$$

$$y = \frac{1}{3}x + h \xrightarrow{(1, 1)} 1 = \frac{1}{3} + h \rightarrow h = \frac{2}{3}$$

$$y = \frac{1}{3}x + \frac{2}{3} \rightarrow \boxed{3y = x + 2}$$



$$BC: m = \frac{1 - 4}{1 - (-1)} = -\frac{3}{2}$$

$$y = -\frac{3}{2}x + h \rightarrow y + \frac{3}{2}x - \frac{1}{2} = 0$$

$$BC = \sqrt{9 + 14} = a$$

$$AH = \frac{1 + \frac{1}{3} - \frac{1}{3}}{\sqrt{1 + \frac{9}{9}}} = \frac{1}{\sqrt{2}}$$

$$BC = \sqrt{(1+1)^2 + (4-1)^2} = \sqrt{4+9} = \sqrt{13}$$

$$m_{BC} = \frac{3}{-2} \rightarrow y + \frac{3}{2}x - \frac{1}{2} = 0$$

$$BC - AH = \sqrt{13} - \frac{1}{\sqrt{2}} = \frac{9\sqrt{2}}{\sqrt{13}}$$

$$BC, A \text{ و } G = 2$$

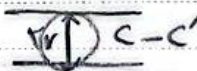
$$a - 2 = 2$$



$$\frac{a}{\pi} = \frac{1}{2} \Rightarrow a = 2$$

$$\pi y - 2x - 2 = 0 \rightarrow 2y - x - 1 = 0$$

$$2y - x - 1 = 0$$

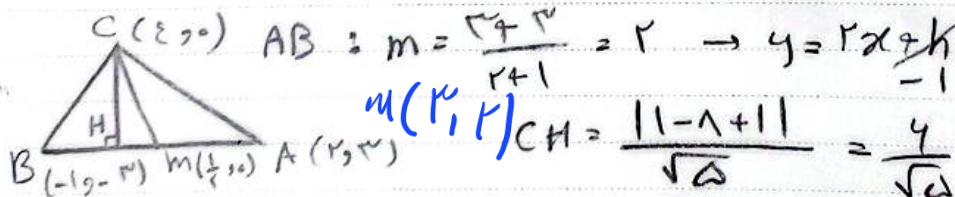


$$2y - x = 1$$

$$2y - x = 1 \rightarrow d = \frac{|1 - 1|}{\sqrt{4 + 1}} = \frac{4}{\sqrt{5}}$$

$$d = \frac{4}{\sqrt{5}} \quad S = \frac{4}{a}$$

$$C - C' = -1 + 1 = 0 \rightarrow 2r = 4 \rightarrow \boxed{r = 2}$$



$$AB: m = \frac{3 - 3}{2 - (-1)} = 0 \rightarrow y = 3$$

$$CH = \frac{|1 - 1 + 1|}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$m_{AB} = 0$$

$$CH: y = 3 - 1$$

$$m_H = \frac{1 - 3 + 1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$CM = \sqrt{(\frac{1}{2} - 1)^2 + 1} = \frac{\sqrt{2}}{2}$$

$$\Rightarrow \sqrt{\frac{1}{2} - \frac{1}{2}} = \sqrt{\frac{1}{2}} = \frac{\sqrt{2}}{2}$$

$$m' = \frac{m - 2}{m - 1} \quad \left\{ \begin{array}{l} mm' = -1 \\ m = \frac{m+1}{2m-1} \end{array} \right.$$

$$(2m - 2)(m + 1) = (1 - m)(2m - 1)$$

$$2m^2 - 1 - 2m + 1 = 0$$

$$\Delta C \rightarrow m \text{ مقدار}$$

μ_0

$AB \perp AC \rightarrow \hat{A} = 90^\circ \quad A \parallel B \mid C \mid \frac{a}{\sqrt{2}}$

دو تنه

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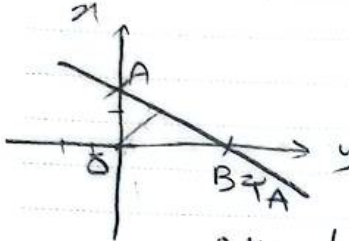
2020 July 20

$Am = \sqrt{\frac{A^2}{r^2} + \frac{1}{r^2}} = \frac{\sqrt{2}}{r} = \frac{A\sqrt{2}}{r}$

$m \mid \frac{1}{r}$

$AH = \frac{|1 + 1 - \varepsilon|}{\sqrt{2}} = \frac{2}{\sqrt{2}} = \sqrt{2}$

$Am = \frac{A\sqrt{2}}{r}, AH = \sqrt{2} \Rightarrow \frac{Am}{AH} = \frac{A}{r}$

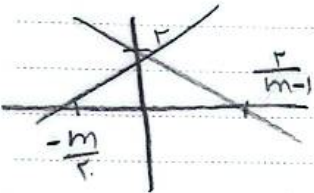


$SOAB = \sqrt{A^2 + B^2}$

$y = -\frac{1}{r}x + h \quad (B, 0) \rightarrow h = \frac{B}{r} \Rightarrow \boxed{A=B}$
 $\downarrow$
 $h = A$

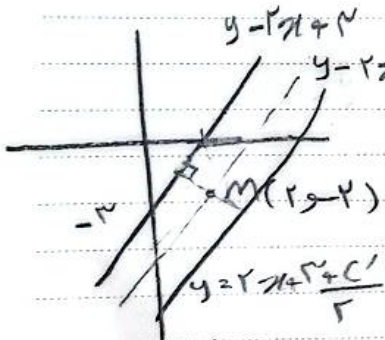
$y + \frac{1}{r}x + A = \sqrt{2} \Rightarrow A = \sqrt{2} \times \frac{A}{r} = A$

$L = \sqrt{10^2 + 2^2} = \sqrt{104} = 2\sqrt{26}$



$(\frac{r}{m-1} + \frac{m}{r}) \times \frac{1}{r} = \frac{A}{r}$

$r(\varepsilon + m - m) = 1 \cdot (m-1) \Rightarrow m^2 - 4m + 9 = 0 \Rightarrow \boxed{\frac{C}{a}}$

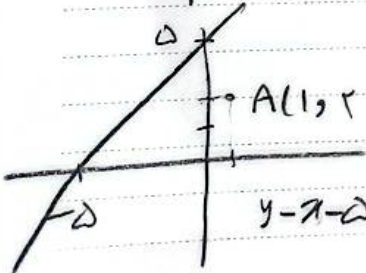


$y - 2x + \frac{r+C'}{r} = 0$

$m(r, y) \rightarrow r + \varepsilon = -\frac{r+C'}{r} \Rightarrow r = -r - C'$

$y - 2x - 4 = 0$

$\frac{a+r}{r} = r \rightarrow a = r$
 $\frac{b-r}{r} = -r \rightarrow b = -1$
 $C' = -1A$
 $\rightarrow m_d = r$
 $y = rx - 9$



$\frac{|r-1-a|}{\sqrt{2}} = \frac{b-a-d}{\sqrt{2}}$

$\varepsilon = b-a-d \rightarrow b-a=9$
 $-\varepsilon = b-a-d \rightarrow b-a=1$

$y = -x + h \rightarrow y = -x + r$
 $b = -a + r$

$b-a=1 \rightarrow b=2$
 $b+a=3 \rightarrow a=1$

$b-a=9$
 $b+a=3 \rightarrow \boxed{b=4, a=-1} \rightarrow 2b-a=10$

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