

$$A(-2, k) \quad B(4, m) \quad \frac{k-m}{-2-4} = -\frac{1}{2} \Rightarrow \frac{k-m}{-6} = \frac{1}{2} \quad (1)$$

$$\Rightarrow k-m = 3$$

فاصله آن ها = $\sqrt{(k-m)^2 + (-2-4)^2}$

$$= \sqrt{3^2 + 4^2} = \sqrt{9+16} = \sqrt{25} = 5$$

$$\Rightarrow \text{مساحت} = 3 \times 4 = 12$$

$$A(-1, 2) \quad B(3, 1) \quad C(x, y) \quad (2)$$

$$D(-1-x, y+3)$$

$$A(-1, 2) \quad B(3, 1)$$

$$m_{CD} = \frac{y+3-y}{-1-x-3} = \frac{3}{-1-4x}$$

$$D(-1-x, y+3) \quad C(x, y)$$

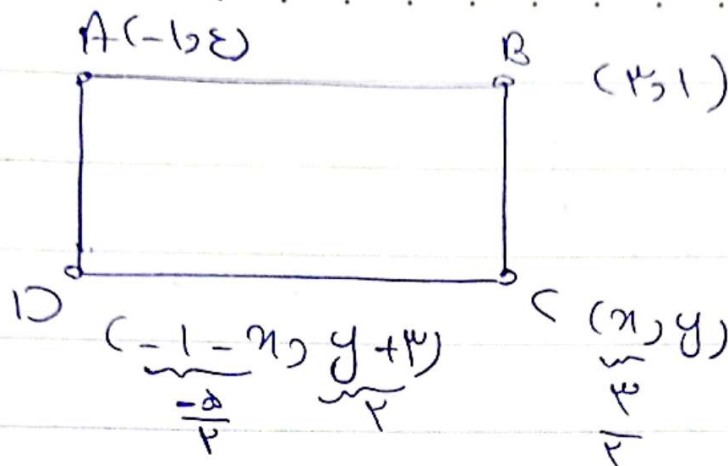
$$m_{AB} = \frac{1-2}{3-(-1)} = \frac{-1}{-4} = \frac{1}{4}$$

$$m_{AB} = m_{CD} \quad \text{موازی هستند}$$

$$1+4x = 4 \Rightarrow x = \frac{3}{4}$$

$$A \rightarrow C \quad y_A + y_C = y_B + y_D$$





(2)

★ با توجه به صفت های بی جبریم A و B روی C است چون:

$$y_A + y_C = y_B + y_D \Rightarrow y + \varepsilon = y + 1 + 1$$

$$\Rightarrow x_A + x_C = x_B + x_D \Rightarrow x - 1 = 1 - x$$

$$x = \frac{3}{2}$$

$$m_{DC} = \frac{y+3 - y}{-1 - \frac{x}{p} - \frac{x}{p}} = \frac{3}{-2} \Rightarrow m_{AD} = \frac{3}{2}$$

$$\Rightarrow \frac{\varepsilon - y - 3}{-1 + \frac{x}{p}} = \frac{1 - y}{\frac{x}{p}} = \frac{x}{p} \Rightarrow \frac{1 - y}{\frac{x}{p}} = \frac{\varepsilon}{\frac{x}{p}} \Rightarrow y = -1$$

$$AD \text{ طول} = \sqrt{(-1 + \frac{x}{p})^2 + (\varepsilon - 1)^2} = \sqrt{\frac{1}{4} + \varepsilon} = \sqrt{\frac{1 + 4\varepsilon}{4}} = \frac{1 + 2\varepsilon}{2}$$

$$CD \text{ طول} = \sqrt{(-\frac{x}{p} - \frac{x}{p})^2 + (1+1)^2} = \sqrt{\varepsilon^2 + 4} = 2$$

$$\Rightarrow \text{مساحت} = (2 + \frac{\varepsilon}{2}) \times 2 = (4 + \varepsilon)$$

$$2m x + (m^2 - 1) y = 3 \quad (2)$$

$$y_0 \text{ نوبت} \Rightarrow \tan \gamma_0 = \frac{3}{\sqrt{3}}$$

$$\Rightarrow \frac{-2m}{(m^2 - 1)} = \sqrt{3} \Rightarrow -2m = \sqrt{3} m^2 - \sqrt{3}$$

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

$$\rightarrow \Delta = 4 + 3 \times 3 = 17 \rightarrow \sqrt{17}$$

$$\rightarrow \frac{\text{اختلاف مقادير}}{\text{مقادير}} = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{17}}{|\sqrt{3}|} = \frac{\epsilon}{\sqrt{3}} = \frac{\epsilon \sqrt{3}}{3}$$

(7)

$$A(6, 9) \quad B(3, 3) \quad C(7, 11)$$

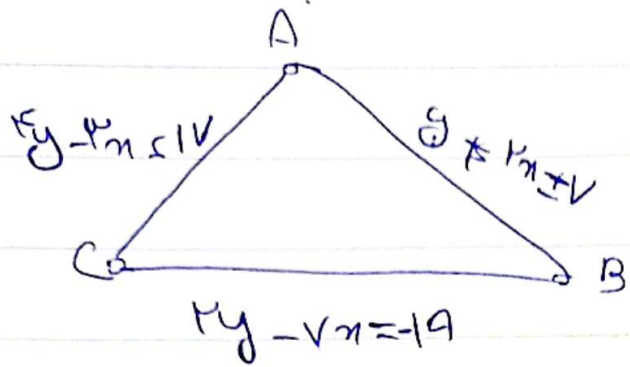
* خط A-شعاع = فاصلہ - اس A-شعاع BC

$$BC \text{ شعاع} \rightarrow m = \frac{11 - 3}{7 - 3} = \frac{8}{4} = 2 \Rightarrow 2x + b = y$$

$$\rightarrow 4 + b = 3 \Rightarrow b = -1 \Rightarrow BC = 2x - 1 = y - 2x + 1 = 0$$

$$r = \frac{|x_0 a + y_0 b + c|}{\sqrt{a^2 + b^2}} = \frac{|-2 \times 6 + 9 \times 1 + 1|}{\sqrt{4 + 1}} = \frac{10}{\sqrt{5}} = \frac{10\sqrt{5}}{5}$$

$$2\sqrt{5}$$



☆ ارتفاع BH = فاصله از اس
A-C منع B

بر فرض در A و B و C اس

$$\Rightarrow y + 2x = 14 \text{ و } y - 2x = -14 \Rightarrow y - 2x = \frac{y + 2x - 14}{2}$$

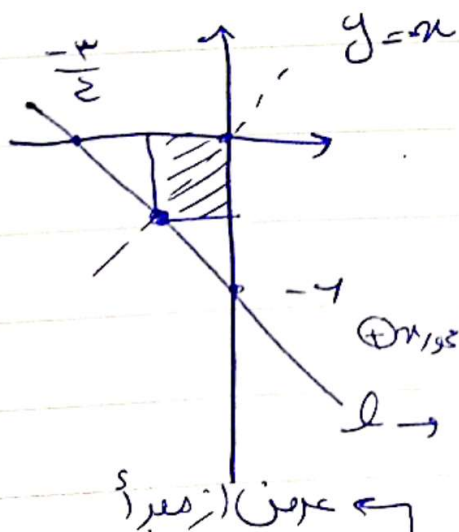
$$14 - 2x = y - 2x - 14$$

$$11x = 28$$

$$\text{فاصله } AC = \frac{|Ax + By + C|}{\sqrt{A^2 + B^2}}$$

$$y - 2x = -14 \Rightarrow$$

$$= \frac{|0 - 1 - 14|}{5} = \frac{15}{5} = 3$$



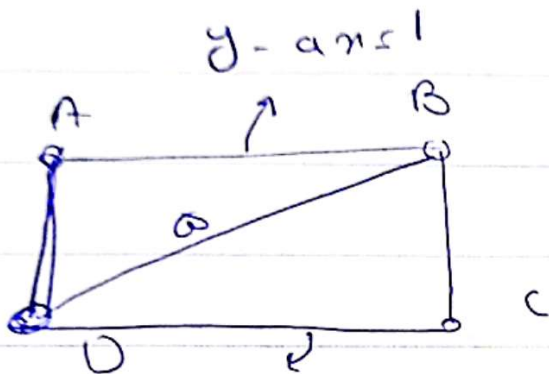
④ یک اس روی مبدأ مختصات است
← قطر آن روی نیم سازه (1) و (3) است

$$\text{زاویه با محور } x \rightarrow m = - \left| \frac{4}{\frac{1}{\frac{1}{3}} \frac{1}{4}} \right| = - \left| \frac{4 \times 3}{1} \right| = -12$$

$$\Rightarrow -12x - 4 = x \Rightarrow -4 = 13x \Rightarrow x = -\frac{4}{13}$$

$$y = -\frac{2}{13}$$

$$\text{اندازه قدر} = \sqrt{\left(-\frac{2}{\sqrt{2}} - 0\right)^2 + \left(\frac{2}{\sqrt{2}} - 0\right)^2} = \frac{2\sqrt{2}}{\sqrt{2}}$$



AB و CD → می

✓

$$\frac{a}{a'} = \frac{b}{b'} \neq \frac{c}{c'}$$

$$ay - x = a - 1$$

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

$$AD: y - ax - 1 = 0$$

$$-a^2 = -1$$

$$DC = ay - x - a + 1 = 0 \quad a^2 \leq 1 \Rightarrow a = \pm 1$$

نکته: (ب) A رأس (ب) از معادله حاصل می‌گیرد بنابراین:

$$\textcircled{1} a = 1 \Rightarrow AB: y - x - 1 = 0 \Rightarrow 2 - 1 - 1 = 0 \quad \checkmark \checkmark$$

$$DC: y - x = 0 \Rightarrow 2 - 1 \neq 0$$

$$\textcircled{2} a = -1 \Rightarrow AB: y + x = 1 \Rightarrow 2 + 1 \neq 1 \quad \times \times$$

$$\hookrightarrow DC: -y - x = -2 \Rightarrow -2 - 1 \neq -2 \quad \times \times$$

$$BC \text{ ضلع} = DC \neq AB \text{ ضلع}$$

$$1 = a \quad \neq$$

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$$d = \frac{|c - c'|}{\sqrt{a^2 + b^2}} =$$

$$AB: y - x = 1 \quad CD: y - x = 0$$

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

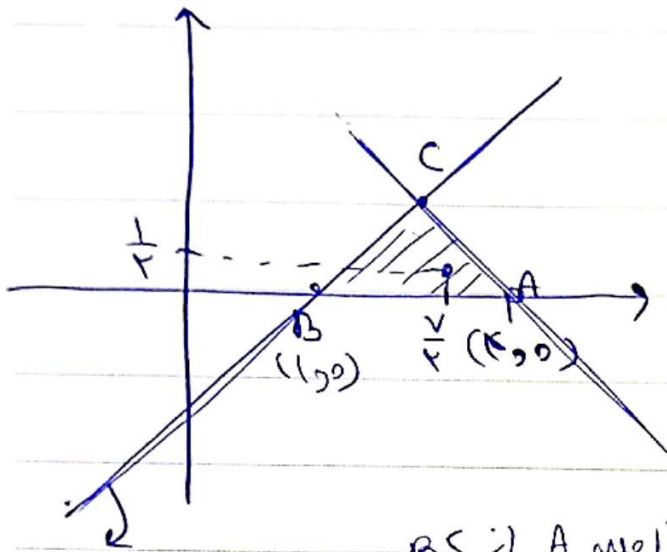
$$\Rightarrow \frac{1}{\sqrt{2}} - BC = CD \Rightarrow \sqrt{2} - \frac{1}{\sqrt{2}} = \sqrt{\frac{2g}{f}}$$

$$\Rightarrow 8 = \frac{v}{\sqrt{f}} \times \frac{1}{\sqrt{f}} = \frac{v}{f} = \boxed{\frac{v}{f}} = \frac{v}{\sqrt{f}}$$

in (Page)

A(4,0)

①



* ابتدا برای محاسبه طول نقطه

B برقرار $x-3y=1$ بنامورد n را بررسی می کنیم:

$$n-0=1 \Rightarrow \boxed{n=1}$$

چون طبق داده سوال طول میانی از اضلاع بنا شده A و B است

$$x-3y=1$$

برابری بین ابتدا AH را حساب می کنیم:

$$AH = \frac{|4x - 3y - 1|}{\sqrt{4+1}} = \frac{3}{\sqrt{5}}$$

حال ② حالت داریم: ① ضلع AC برابر $\frac{3}{\sqrt{5}}$ و ② ضلع BC $\frac{3}{\sqrt{5}} = BC$ اما سوال از ما حدیث مقدار مساحت را می خواهد پس باید مقادیر ما بهترین مساحت را داشته باشد.

$$\Rightarrow \left(x, \frac{x-1}{3}\right) \rightarrow \text{if } AC = \frac{3}{\sqrt{5}}$$

$$x-3y=1$$

$$\Rightarrow (x-4)^2 + \left(\frac{x-1}{3}\right)^2 = \frac{9}{5}$$

$$100x^2 - 740x + 1580 = 81$$

$$100x^2 - 740x + 1499 = 0$$

← لازم

$$9x^2 + 128 - 72x + 4x^2 + 1 - 2x = \frac{9}{1}$$

$$(100x^2 - 740x + 1499) \cdot 10 = 81$$

$$\Delta = \frac{VK_0}{0.7540} - \frac{K_0 \times 1349}{0.7540} = 0$$

$$\Rightarrow \alpha = \frac{VK_0}{K_0} = \boxed{\frac{13}{1}V} \quad \beta = \frac{1 - \alpha}{\mu} = \frac{\mu V - 1}{\mu} = \boxed{0.9}$$

$$\Rightarrow C = \left(\frac{\mu V}{10} + \frac{9}{10} \right) \rightarrow B C = \sqrt{\left(\frac{\mu V}{10} - 1 \right)^2 + \left(\frac{9}{10} \right)^2}$$

$$= \sqrt{\left(\frac{\mu V}{10} \right)^2 + \left(\frac{9}{10} \right)^2} = \frac{9\sqrt{10}}{10} = \frac{9}{\sqrt{10}}$$

$$\Rightarrow \delta = \frac{9}{\sqrt{10}} \times \frac{\mu}{\sqrt{10}} \times \frac{1}{\mu} = \frac{\mu V}{K_0} = \underline{135}$$

چون $B C$ را K_0 که در P چون $B C$ از A بزرگتر است و در واقع چون هدف نقدی چون صفر داشته باید طریقی را مقایسه کنیم چون طول A بزرگتره و ما فاصله از C اصحاب نمی کنیم مدون آن طول x برابر m باشد $\leftarrow x_A > x_B$

$$(-\frac{1}{p}, a) \quad (-\frac{1}{q}, b)$$

$$m = \sqrt{\mu}$$

$$\Rightarrow \frac{b-a}{-\frac{1}{x} - (-\frac{1}{y})}$$

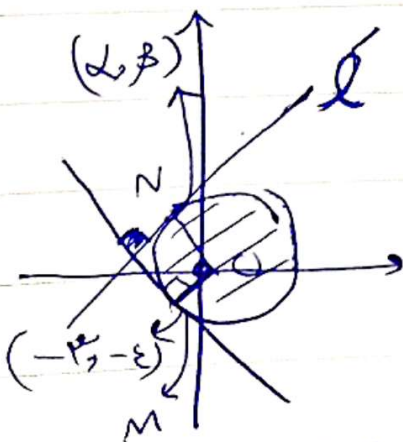
$$= \frac{b-a}{\frac{1}{a}} = \sqrt{u}$$

$$\text{--- مقلضع} = \sqrt{\left(-\frac{1}{\mu} + \frac{1}{\mu}\right)^2 + \left(\frac{b-a}{\frac{\sqrt{\mu}}{q}}\right)^2} \quad \frac{\frac{b-a}{1}}{\frac{1}{a}} = \sqrt{\mu}$$

$$\Rightarrow b-a \leq \frac{\sqrt{\mu}}{q}$$

$$= \sqrt{\frac{1}{\mu n} + \frac{\mu}{2\mu n}} = \sqrt{\frac{2}{\mu n}} \quad \therefore \frac{1}{\sigma} = \sqrt{\frac{1}{\mu}}$$

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



$$\sqrt{\alpha^T + \beta^T} = \omega \rightarrow \omega = \frac{\alpha - \beta}{\beta - \alpha} = \frac{\alpha}{\beta}$$

$$\text{شعاع دایره} = \sqrt{۳^۲ + ۴^۲} = ۵$$

$$\frac{3}{2} \quad 1 \quad \frac{2}{3}$$

$\frac{\alpha}{\beta} = \frac{f}{\mu} \Rightarrow \alpha = \frac{f}{\mu} \beta \Rightarrow \frac{14}{9} \beta + \beta = 25 \Rightarrow \beta = 15$
 $\alpha = \frac{f}{\mu} \beta = \frac{14}{9} \times 15 = 23.33$

ناتمام $\rightarrow \mu - \alpha$ و $\beta = 3$

$$\text{فا} \rightarrow \text{مستطاع} \rightarrow \text{مردر} = \frac{\mu}{\mu} \Rightarrow \frac{-\mu}{\mu}$$

$$\rightarrow -\frac{\mu}{\varepsilon} x + b = y \Rightarrow -\frac{\mu}{\varepsilon} x - \mu + b = -\varepsilon$$

$$\frac{\mu}{\varepsilon} + b = -\varepsilon \Rightarrow b = -\varepsilon - \frac{\mu}{\varepsilon} = \frac{-\mu - \varepsilon^2}{\varepsilon}$$

$$\Rightarrow \left[-\frac{\mu}{\varepsilon} x - \frac{\mu + \varepsilon^2}{\varepsilon} \right] \quad \text{و} \quad \frac{\mu}{\varepsilon} = \text{مردر} \rightarrow \frac{\mu}{\varepsilon}$$

$$y = \frac{\mu}{\varepsilon} x + b$$

مردر

$$\Rightarrow \frac{\mu}{\varepsilon} x - \mu + b = \mu$$

$$\frac{\mu}{\varepsilon} + b = \mu \Rightarrow b = \mu - \frac{\mu}{\varepsilon}$$

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$$-\frac{K}{K}x - \frac{1\delta}{K} = \frac{K}{K}x + \frac{1\delta}{K}$$

$$-9x - 1\delta = 14x + 1\delta$$

$$1\delta x = -14\delta \Rightarrow x = -14$$

$$y = -1$$

$$\boxed{x \times y = -14}$$