

$$\rightarrow y = -1x + b \rightarrow \text{عند } x=0 \rightarrow -4 = -1(0) + b \Rightarrow b = -4$$

$y = -1x - 9$ ← با استفاده از
عمرق از مبدأ

$\rightarrow$ در نقطه (x, x) ~~در~~ $\Rightarrow \alpha = -1\alpha - 9 \Rightarrow 9\alpha = -9 \Rightarrow \alpha = -\frac{1}{3}$
 و α برابر است

$\Rightarrow$  $\Rightarrow$ قطر = $\left(\frac{x}{2}\right)^2 + \left(\frac{x}{2}\right)^2 = x^2 \Rightarrow x = \frac{\sqrt{2}x}{2}$

$$\begin{aligned} ay - n &= a - 1 \\ y - an &= 1 \end{aligned} \rightarrow \text{دو ضلع متقابل} \rightarrow \text{دو ضلع موازی} \rightarrow y = \frac{a}{n}x + \frac{a-1}{a} \quad -v$$

$$\Rightarrow a = \frac{1}{a} \Rightarrow a^2 = 1 \Rightarrow a = \pm 1$$

$\Rightarrow a = 1 \begin{cases} y = n \xrightarrow{n=1} y = 1 \\ y = n + 1 \xrightarrow{n=1} y = 2 \end{cases} \checkmark \Rightarrow a = 1$

دو خط مقابل
 $\Rightarrow y = x \text{ و } y = x + 1$

$\Rightarrow Y = x \text{ و } Y = x + 1 \Rightarrow$ نقطه بین اینی
دو خط

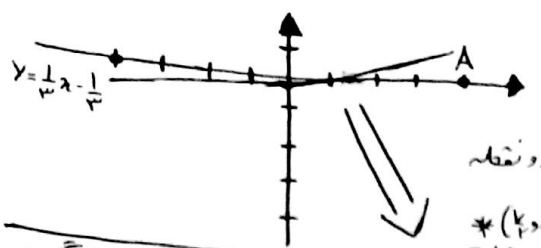
مولتی
از قطع های
برع

$$\begin{aligned} y - x &= 1 \\ y - x &= 0 \end{aligned} \Rightarrow \frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{1}{\sqrt{2}}$$

$$\Rightarrow Y(\omega) = \frac{1}{r} + z^r \Rightarrow z^r = \frac{f_9}{r} \Rightarrow z = \frac{V}{\sqrt{r}}$$

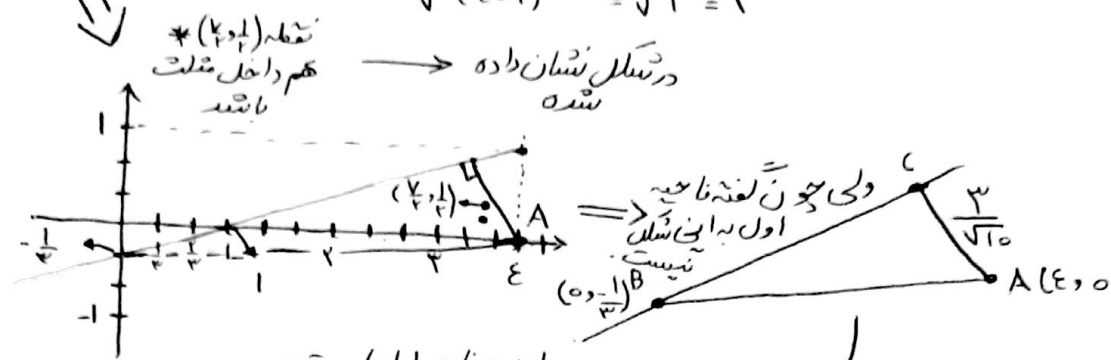
$$\Rightarrow \frac{1}{\sqrt{r}} \begin{array}{c} b \\ \text{---} \\ a \\ \text{---} \\ \sqrt{r} \end{array} \Rightarrow S = ab \Rightarrow S = \frac{v}{\sqrt{r}} \times \frac{1}{\sqrt{r}} = \frac{v}{r} = \omega$$

حل في $z=0$ $\Rightarrow y=0 \Rightarrow z=0$
 نقطة $(0,0)$
 $y-z-1=0 \Rightarrow \frac{|ax_1+by_1+c|}{\sqrt{a^2+b^2}}$
 $\Rightarrow \frac{|0+0-1|}{\sqrt{1}} = \frac{1}{\sqrt{1}}$

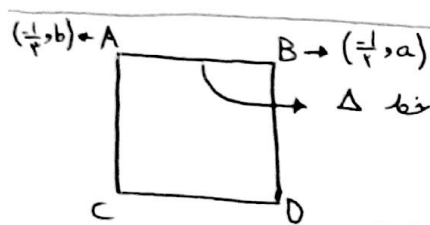
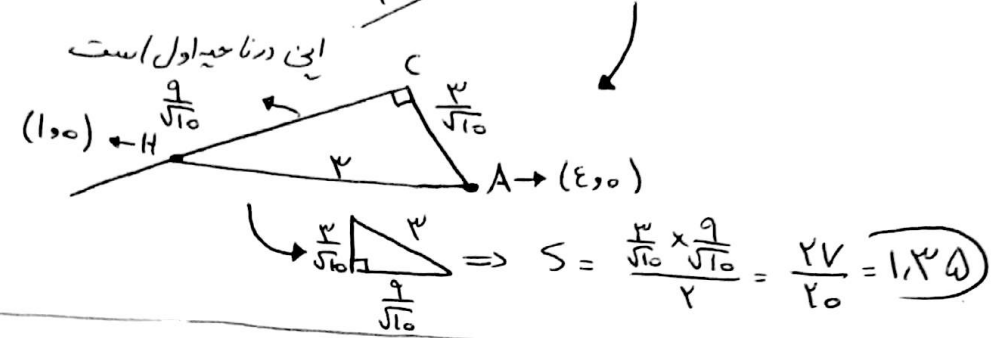


$x - 3y = 1 \Rightarrow 3y = x - 1 \Rightarrow y = \frac{1}{3}x - \frac{1}{3}$
 فاصله نقطه A تا خط $\Rightarrow \frac{|ax_1 + by_1 + c|}{\sqrt{a^2 + b^2}} = \frac{|\frac{1}{3} - \frac{1}{3} + \frac{1}{3}|}{\sqrt{\frac{1}{9} + \frac{1}{9}}} = \frac{\frac{1}{3}}{\frac{\sqrt{2}}{3}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 فاصله بین دو نقطه $= \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{(1 - 0)^2 + (0 - (-1/3))^2} = \sqrt{1 + \frac{1}{9}} = \sqrt{\frac{10}{9}} = \frac{\sqrt{10}}{3}$

نام و نام خانوادگی:
 یاد سال و دروسی
 تاریخ شماره ۱۷
 کلاس یازدهم
 درس B

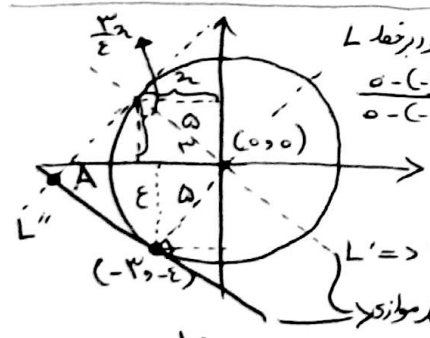


$CH^2 + \frac{9}{10} = 9$
 $\Rightarrow CH^2 = \frac{81}{10} \Rightarrow CH = \frac{9}{\sqrt{10}}$

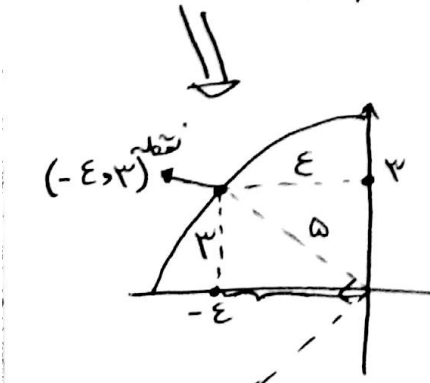


شیب $\rightarrow y = \sqrt{3}x + \dots$
 $a = \frac{-\sqrt{3}}{3} + B$
 $b = \frac{-\sqrt{3}}{3} + B$

فاصله بین دو نقطه A و B $= \sqrt{(\frac{1}{3} - \frac{1}{3})^2 + (\frac{\sqrt{3}}{3} - (\frac{-\sqrt{3}}{3} + B))^2}$
 $= \sqrt{(\frac{1}{3})^2 + (\frac{\sqrt{3}}{3})^2} = \sqrt{\frac{1}{9} + \frac{3}{9}} = \sqrt{\frac{4}{9}} = \frac{2}{3} = \frac{1}{\sqrt{3}}$
 طول یک ضلع $= \frac{1}{\sqrt{3}}$
 $x^2 = \frac{1}{9} + \frac{1}{9} \Rightarrow x^2 = \frac{2}{9} \Rightarrow x = \frac{\sqrt{2}}{3}$

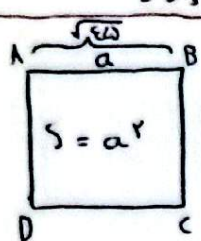


خط عمود بر خط L $\rightarrow m \cdot m_L = -1$
 $\frac{0 - (-4)}{0 - (-3)} = \frac{4}{3}$
 $L \Rightarrow y = \frac{3}{4}x + b$
 $-4 = \frac{3}{4}(-3) + b \Rightarrow b = -\frac{25}{4}$
 $L' \Rightarrow y = \frac{3}{4}x$
 $x^2 + \frac{9}{16}x^2 = 25 \Rightarrow \frac{25}{16}x^2 = 25 \Rightarrow x^2 = 16 \Rightarrow x = \pm 4$
 نسبت به ناحیه ای که در آن قرار دارد.



$L'' \Rightarrow y = \frac{3}{4}x + b$
 $3 = \frac{3}{4}(-4) + b \Rightarrow b = \frac{25}{4}$
 $y = \frac{3}{4}x + \frac{25}{4}$
 برای محاسبه نقطه A با خط L و L'' و با هم مساوی قرار می دهیم
 $\frac{3x + 25}{4} = \frac{-3x - 25}{4} \Rightarrow 16x + 100 = -9x - 75$
 $25x = -175 \Rightarrow x = -7$
 $y = \frac{3(-7) - 25}{4} = \frac{-21 - 25}{4} = \frac{-46}{4} = -\frac{23}{2}$
 نقطه A $\left(-7, -\frac{23}{2}\right)$

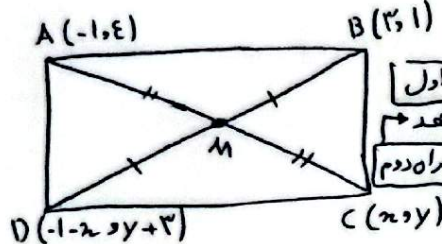
$(-7, -1)$



$$y = -\frac{1}{\sqrt{3}}x + b \quad \begin{cases} K = 1+b \\ B(E, m) \end{cases} \Rightarrow \begin{cases} m = -\sqrt{3}+b \end{cases}$$

$$\text{فاصله دو نقطه} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{(E - (-\sqrt{3}))^2 + (-\sqrt{3} + b - 1 - b)^2} = \sqrt{4^2 + (-\sqrt{3})^2} = \sqrt{19}$$

$$a = \sqrt{19} \rightarrow S = a^2 \rightarrow S = (\sqrt{19})^2 = 19$$



$$m_{AB} \cdot m_{BC} = -1 \quad \begin{cases} \text{مستطیل} \\ \text{فاصله ها بر هم می افتند} \end{cases} \Rightarrow \begin{cases} x_A + x_C = x_B + x_D \\ y_A + y_C = y_B + y_D \end{cases}$$

$$\begin{aligned} &\Rightarrow x - 1 = 3 - x \Rightarrow 2x = 4 \Rightarrow x = 2 \\ &\Rightarrow y + 3 = 1 - y \Rightarrow 2y = -2 \Rightarrow y = -1 \\ &\Rightarrow M = \left(\frac{-1+x}{2}, \frac{4+y}{2} \right) = \left(\frac{1}{2}, \frac{3}{2} \right) \end{aligned}$$

$$m_{AB} = \frac{y_B - y_A}{x_B - x_A} = \frac{1-4}{3-(-1)} = \frac{-3}{4} \rightarrow m_{AB} \cdot m_{BC} = -1 \rightarrow m_{BC} = \frac{4}{3}$$

$$\rightarrow m_{BC} = \frac{4}{3} = \frac{y-1}{x-3} \Rightarrow y = -1$$

$$AB = \sqrt{(3-(-1))^2 + (1-4)^2} = \sqrt{16+9} = 5, \quad BC = \sqrt{(3-\frac{1}{2})^2 + (1-(-1))^2} = \sqrt{(\frac{5}{2})^2 + (2)^2} = \sqrt{\frac{25}{4} + 4} = \sqrt{\frac{33}{4}} = \frac{\sqrt{33}}{2}$$

$$\text{مساحت} = \frac{1}{2}(5 \cdot \frac{\sqrt{33}}{2}) = \frac{5\sqrt{33}}{4}$$

$$2mx + (m^2 - 1)y = 3 \rightarrow \text{با جهت } \oplus \text{ موازی } \rightarrow \text{شیب خط} = \tan 60^\circ$$

$$\tan 60^\circ = \sqrt{3}$$

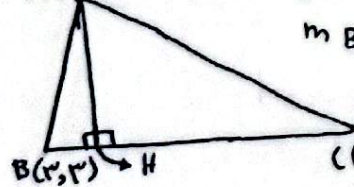
$$2mx + (m^2 - 1)y = 3 \Rightarrow (m^2 - 1)y = -2mx + 3 \Rightarrow y = \frac{-2m}{m^2 - 1}x + \frac{3}{m^2 - 1} \Rightarrow m = \frac{-2m}{m^2 - 1}$$

$$m = \frac{-2m}{m^2 - 1} = \sqrt{3} \Rightarrow -2m = \sqrt{3}m^2 - \sqrt{3} \Rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} = 0 \Rightarrow \Delta = 4 + 12 = 16 \Rightarrow x_1, x_2 = \frac{-2 \pm 4}{2\sqrt{3}}$$

$$\rightarrow \begin{cases} x_1 = \frac{-2+4}{2\sqrt{3}} = \frac{1}{\sqrt{3}} \\ x_2 = \frac{-2-4}{2\sqrt{3}} = \frac{-3}{\sqrt{3}} \end{cases} \xrightarrow{\text{اختلاف}} \frac{1}{\sqrt{3}} - \left(\frac{-3}{\sqrt{3}} \right) = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3}$$

$$\begin{aligned} \text{فاصله} &\Rightarrow |\alpha - \beta| = \frac{\sqrt{\Delta}}{|a|} \\ &\Rightarrow \frac{\sqrt{16+12}}{\sqrt{3}} = \frac{4}{\sqrt{3}} = \frac{4\sqrt{3}}{3} \end{aligned}$$

A(1, 9)



$$\text{فاصله} \rightarrow BC \text{ خط} \Rightarrow y = 2x + b \xrightarrow{\text{فاصله نقطه}} 3 = 6 + b \Rightarrow b = -3$$

$$m_{BC} = \frac{y_B - y_C}{x_B - x_C} = \frac{3-11}{3-7} = \frac{-8}{-4} = 2$$

$$\Rightarrow BC \text{ خط} = y = 2x - 3 \Rightarrow y - 2x + 3 = 0$$

$$\begin{aligned} \text{فاصله نقطه} &= \text{فاصله} = \frac{|ax_1 + by_1 + c|}{\sqrt{a^2 + b^2}} = \frac{|1 \cdot 1 + 2 \cdot 9 - 3|}{\sqrt{1^2 + 2^2}} = \frac{10}{\sqrt{5}} = \frac{10\sqrt{5}}{5} = 2\sqrt{5} \\ &= 2\sqrt{5} \end{aligned}$$

$$\text{فاصله} \rightarrow AH \text{ عمود بر } BC \Rightarrow m_{BC} \cdot m_{AH} = -1 \Rightarrow m_{AH} = -\frac{1}{2}$$

$$AH \text{ خط} \Rightarrow y = -\frac{1}{2}x + b \xrightarrow{\text{فاصله نقطه}} 9 = -\frac{1}{2} \cdot 1 + b \Rightarrow b = \frac{19}{2} \rightarrow AH \text{ خط} = y = -\frac{1}{2}x + \frac{19}{2}$$

$$\text{فاصله} \Rightarrow -\frac{1}{2}x + \frac{19}{2} = 2x - 3 \Rightarrow -x + 19 = 4x - 6 \Rightarrow 5x = 25 \Rightarrow x = 5 \rightarrow y = 7$$

H(5, 7)

$$\text{فاصله دو نقطه} = \sqrt{(5-1)^2 + (7-9)^2} = \sqrt{16+4} = \sqrt{20} = 2\sqrt{5}$$