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لغات البرهان - تليق - مادة ١٧ - باز دعم (فئة)

$$A \begin{vmatrix} -r \\ k \end{vmatrix} \quad B \begin{vmatrix} r \\ m \end{vmatrix}$$

$$m = \frac{\Delta y}{\Delta x} = -\frac{1}{r} \Rightarrow \frac{k-m}{-r-r} = -\frac{1}{r} \rightarrow k-m=r$$

$$\text{مساحة} = \sqrt{r^2 + 9} = \sqrt{r^2} = r\sqrt{0}$$

$$\text{مساحة} = r\sqrt{0} \times r\sqrt{0} = 9 \times 0 = \boxed{0}$$



$$AB \parallel CD \Rightarrow m_{AB} = m_{CD} = \frac{r}{-r} = -\frac{r}{r_{n+1}} \rightarrow$$

$$AB \perp AC \Rightarrow m_{AB} \times m_{AC} = -1$$

$$-\frac{r}{r} \times \frac{1-y}{m} = -1 \rightarrow \frac{ry-r}{r \times \frac{r}{r}} = 1 \rightarrow ry-r=9 \rightarrow y=r$$

$$\sqrt{\Delta x^2 + \Delta y^2} \Rightarrow \sqrt{9+14} = \sqrt{r^2} = 0$$

$$\sqrt{\frac{9}{r} + r} \Rightarrow \sqrt{\frac{r^2}{r}} = \frac{r}{r} = 1, 0 \quad P = (0+r, 0) = (0)$$

$$(m^2-1)y = -rmx + r \Rightarrow y = \frac{-rm}{m^2-1}x + \frac{r}{m^2-1}$$

$$\tan 45^\circ = r\sqrt{r} \rightarrow \frac{-rm}{m^2-1} = \sqrt{r} \rightarrow \sqrt{r}m - \sqrt{r} = -rm \rightarrow \sqrt{r}m^2 + rm - \sqrt{r} =$$

$$m^2 + rm - r = 0 \rightarrow (m + \frac{r}{\sqrt{r}})(m - \frac{1}{\sqrt{r}}) \Rightarrow m_1 = \frac{r}{\sqrt{r}} = -\sqrt{r}$$

$$m_2 - m_1 = \frac{\sqrt{r}}{r} - (-\sqrt{r}) = \frac{\sqrt{r}}{r} + \sqrt{r} = \boxed{\frac{r\sqrt{r}}{r}}$$

AH (أح) $\Rightarrow$ BC (بج) ; A (أ) (أ) (أ)

$$BC \text{ (بج)} \Rightarrow m_{BC} = \frac{11-r}{\sqrt{r}} = r$$

$$y-r = r(x-r) \rightarrow y-r = rx-r$$

$$y = rx - r \rightarrow y - rx + r =$$

$$AH = \frac{|ax+by+c|}{\sqrt{a^2+b^2}} \Rightarrow \frac{|9-r+r|}{\sqrt{1+r}} \Rightarrow \frac{1}{\sqrt{0}} \times \frac{\sqrt{0}}{\sqrt{0}} = \frac{1 \cdot \sqrt{0}}{0} = \boxed{r\sqrt{0}}$$

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$$B \text{ lies on } AC \Rightarrow 17y - 17x - 17 = 0$$

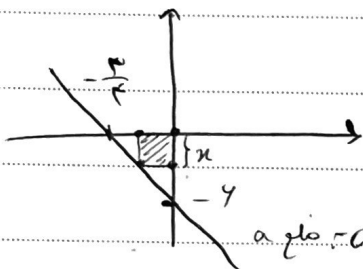
AC bisects

$$\begin{cases} BC = y + 17x - 17 = 0 & \text{--- } d \\ AB = 17y - 17x + 17 = 0 & \rightarrow 17y - 17x - 17 = 0 \end{cases}$$

$$17x - 17y = 0$$

$$\begin{aligned} x &= y \\ y &= 1 \end{aligned}$$

$$BH = \frac{|ax + by + c|}{\sqrt{a^2 + b^2}} = \frac{|17 - 17 - 17|}{\sqrt{17^2 + 17}} = \frac{17}{8} = \boxed{\frac{17}{8}}$$



$$\frac{x}{\frac{17}{8}} = \frac{y - x}{y} \Rightarrow 4x = \frac{9}{y} - \frac{17}{8}x \Rightarrow \frac{17}{8}x = \frac{9}{y}$$

$$x = \frac{9}{y} \cdot \frac{8}{17} = \frac{72}{17y}$$

$$a \text{ line perpendicular to the line} \Rightarrow \boxed{a} \rightarrow \text{length} = a\sqrt{2}$$

$$\text{length} = a\sqrt{2} \rightarrow \boxed{\frac{17}{8}\sqrt{2}}$$

$$y = ax + 1$$

$$ay = x + a - 1 \rightarrow y = \frac{1}{a}x + \frac{a-1}{a} \quad \text{line perpendicular to } 1 \neq \frac{a-1}{a} \checkmark$$

$$\text{parallel} \rightarrow a = \frac{1}{a} \rightarrow a^2 - 1 = 0 \rightarrow a = \pm 1$$

$$y = x + 1, y = x \quad (1, 2) \rightarrow 2 = 1 + 1 \checkmark$$

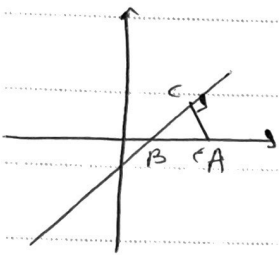
$$y = -x + 1, y = -x + 2 \quad (1, 2) \rightarrow 2 = -1 + 2, 2 = -1 + 1 \times$$

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

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

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$$y = \frac{1}{r}x - \frac{1}{r}$$

$$m_{AC} = -r \rightarrow y = -r(x-1) \quad \text{--- A}$$

$$y = -rx + 1r$$

$$-rx + 1r = \frac{1}{r}x - \frac{1}{r} \rightarrow \frac{rx}{r} = \frac{1-r}{r} \rightarrow x = \frac{1-r}{r} \quad y = 0.19$$

B!

درین حالت $C = B = \left(\frac{1}{r}, \frac{1}{r}\right)$

$$AC = \sqrt{(0.3)^2 + (0.9)^2} = 0.3\sqrt{10}$$

$$BC = \sqrt{(1, 0)^2 + (0, 1)^2} = 0.9\sqrt{10}$$

$$S = \frac{AB \times BC}{r} \Rightarrow \frac{0.3\sqrt{10} \times 0.9\sqrt{10}}{r} = \boxed{1, 30}$$

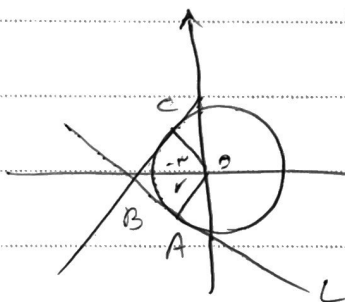
$$m = \sqrt{r} \rightarrow \frac{b-a}{-\frac{1}{r} + \frac{1}{r}} \rightarrow \frac{b-a}{\frac{1}{r}} = \sqrt{r} \rightarrow b-a = \frac{\sqrt{r}}{r}$$

$$\sqrt{\left(\frac{\sqrt{r}}{r}\right)^2 + \frac{1}{r^2}} = \sqrt{\frac{r}{r^2} + \frac{1}{r^2}} = \frac{r}{r} = \frac{1}{r}$$

$$\frac{a}{r} = \frac{1}{r} \rightarrow \boxed{\frac{a}{r} = \frac{1}{r}}$$

نقطه A و B را در خط

$$\Rightarrow \sqrt{(0+r)^2 + (0+r)^2} \Rightarrow r = 2$$



$$m_{AB} = \frac{r}{r} \rightarrow m_{BC} = \frac{r}{r} \rightarrow BC = y = \frac{r}{r}x + b$$

$$m = \frac{r}{r}$$

$$y = \frac{r}{r}x$$

$$\rightarrow ry - rx = rb = 0$$

$$\text{فاصله BC از O باشد} \Rightarrow \frac{|ry - rx - rb|}{r} = r \rightarrow -rb = ra$$

$$b = \frac{ra}{r} = a, \quad -\frac{ra}{r} = -a$$

$$BC \rightarrow y = \frac{r}{r}x + \frac{ra}{r} \rightarrow BC = -rx + ry - ra = 0$$

$$m_{AB} = -\frac{r}{r} \rightarrow y + r = -\frac{r}{r}(x + r) \Rightarrow y = -\frac{r}{r}x - \frac{ra}{r} \rightarrow AB = rx + ry + ra = 0$$

$$x = \frac{-ra - 1}{-1 - 1} = -1$$

$$y = \frac{-1 - ra}{-1 - 1} = -1$$

$$xy = -1 \times -1 = 1$$

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