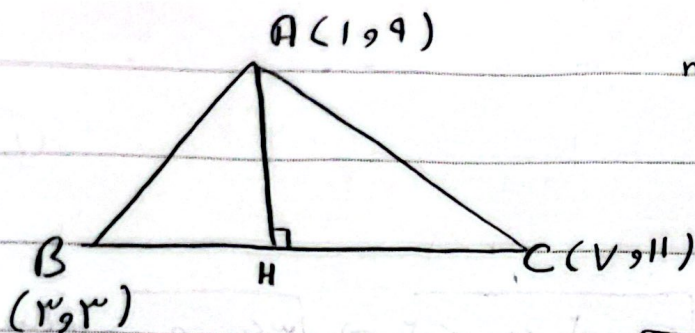




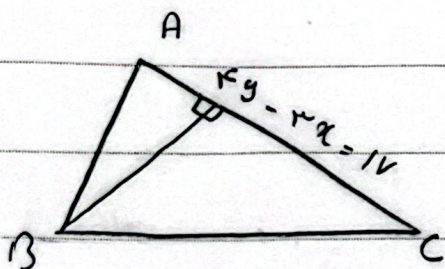
$$m_{BC} = \frac{11-3}{7-3} = \frac{8}{4} = 2 \quad (2) \quad (F)$$

$$\Rightarrow y - 3 = 2(x - 3) \Rightarrow y = 2x - 3$$

BC معادله

فاصله نقطه A از خط BC = ارتفاع AH

$$\Rightarrow \frac{|1 - 2 + 3 + 9|}{\sqrt{4 + 1}} = \frac{10}{\sqrt{5}} \Rightarrow 2\sqrt{5}$$



(5) استقامت نقطه A نسبت به خط BC ...

$$\begin{cases} 2y - 7x = -19 \\ y + 2x = 7 \end{cases} \Rightarrow \begin{cases} -2y - 4x = +14 \\ 2y - 7x = -19 \end{cases} \Rightarrow -11x = -23 \Rightarrow x = \frac{23}{11}$$

$$\Rightarrow x = 3, y = 1$$

$$\Rightarrow B(3, 1)$$

طول ارتفاع BH

$$AC \text{ از } B \Rightarrow \frac{|4 - 9 - 14|}{\sqrt{9 + 16}} = \frac{22}{5}$$

(6) از فرمول راس متقابل بر روی صفحه تقسیم نالسن

مساحت = نصف

$$\frac{6-a}{6} = \frac{a}{\frac{6}{2}} \Rightarrow \frac{6-a}{6} = \frac{2a}{6} \Rightarrow (2)$$

$$6 - a = 2a \Rightarrow 3a = 6 \Rightarrow a = \frac{6}{3} = 2$$

$$\square \text{ قطر} \Rightarrow \sqrt{2} \times \frac{2}{3} = \frac{2\sqrt{2}}{3}$$

$$\frac{x}{-\frac{6}{3}} + \frac{y}{-6} = 1 \Rightarrow \frac{4x}{-3} + \frac{y}{-6} = 1 \Rightarrow \frac{-4a}{-3} + \frac{-a}{-6} = 1$$

$$\Rightarrow \frac{4}{3}a + \frac{a}{6} = 1 \Rightarrow \frac{14a}{6} = 1 \Rightarrow \frac{7a}{3} = 1 \Rightarrow 7a = 3 \Rightarrow a = \frac{3}{7}$$

$$a = \frac{6}{9} = \frac{2}{3} \Rightarrow \square \text{ قطر} = \sqrt{2} \times \frac{2}{3} = \frac{2\sqrt{2}}{3}$$

Scanned with

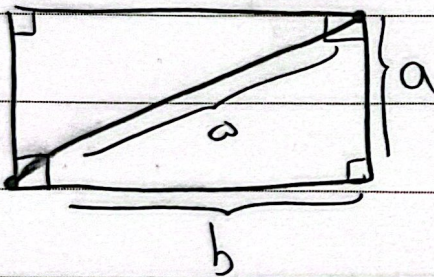
if $ay - x = a - 1$, $y - ax = 1$ both (V)

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

$$\text{if } (a=1) \Rightarrow \begin{cases} y-x=1 \xrightarrow{(1) \times 2} 2-1=1 \checkmark \\ y-x=0 \xrightarrow{(1) \times 2} 2-1 \neq 0 \end{cases}$$

$$\text{if } (a=-1) \Rightarrow \begin{cases} y+x=1 \xrightarrow{(1) \times 2} 1+2 \neq 1 \\ -y-x=2 \xrightarrow{(1) \times 2} -1-2 \neq -2 \end{cases}$$

$$\Rightarrow \frac{|-1+2|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}} = a \Rightarrow b^2 + \frac{1}{2} = 2a \Rightarrow b^2 = \frac{8}{2} \Rightarrow b = \frac{\sqrt{8}}{\sqrt{2}}$$

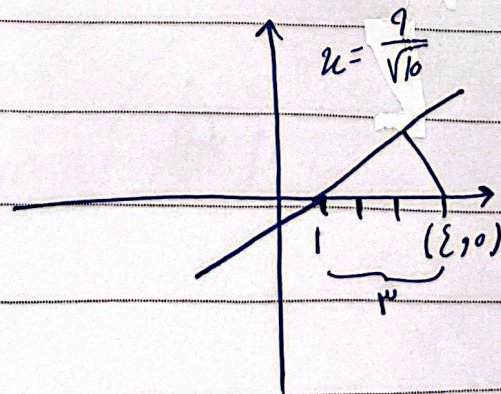


$$S_{\square} = \frac{\sqrt{8}}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{\sqrt{8}}{2}$$

$$d = \frac{|2-1|}{\sqrt{1+9}} = \frac{1}{\sqrt{10}}$$

$$x = \sqrt{9 - \frac{9}{10}} = \sqrt{\frac{81}{10}} = \frac{9}{\sqrt{10}}$$

$$S = \frac{1}{2} \times \frac{1}{\sqrt{10}} \times \frac{9}{\sqrt{10}} = \frac{9}{20} = 1/20$$



$$\sqrt{3} = \frac{b-a}{-\frac{1}{3} + \frac{1}{2}} \Rightarrow \sqrt{3} = \frac{b-a}{\frac{1}{6}} \Rightarrow b-a = \frac{\sqrt{3}}{6}$$

(4)

$$\text{طول ضلع مربع} \Rightarrow \sqrt{\left(-\frac{1}{3} + \frac{1}{2}\right)^2 + \left(\frac{\sqrt{3}}{6}\right)^2} \Rightarrow \sqrt{\frac{1}{36} + \frac{3}{36}} = \frac{1}{3}$$

(5)

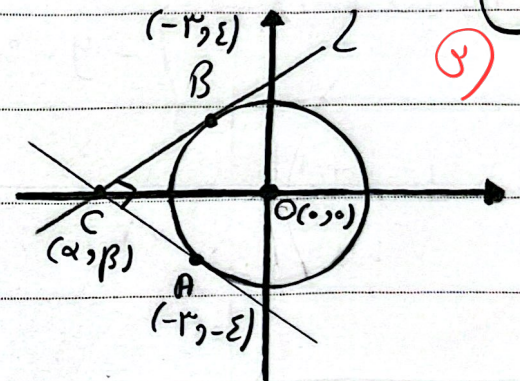
$$\text{طول قطر مربع} \Rightarrow \sqrt{2} \times \frac{1}{3} = \frac{\sqrt{2}}{3}$$

$$r = \sqrt{(0+1)^2 + (0+1)^2} = \sqrt{2} = \sqrt{2} = \sqrt{2}$$

$$m_{OA} = \frac{1}{1} \Rightarrow m_{AC} = -\frac{1}{m_{OA}} = -1$$

$$\Rightarrow \frac{-1-\beta}{-1-\alpha} = -1 \Rightarrow \beta = -1, \alpha = -1$$

$$\Rightarrow C(-1, -1) \Rightarrow \alpha\beta = -1 \times -1 = 1$$



(6)

(7)