

19

مسألة مسقط

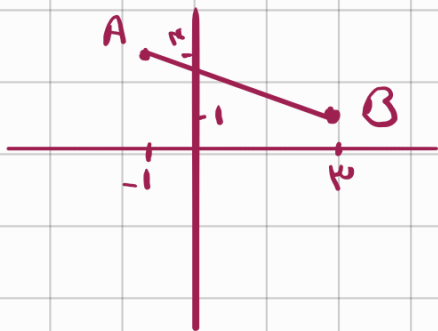
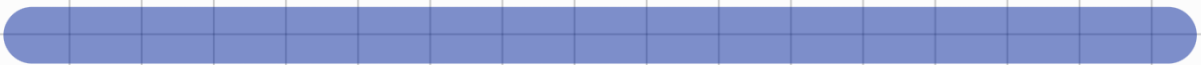
$$\left. \begin{aligned} y-k &= -\frac{1}{\mu}(x+\mu) \Rightarrow y = -\frac{1}{\mu}x - 1 + k \\ y-m &= -\frac{1}{\mu}(x-\mu) \Rightarrow y = -\frac{1}{\mu}x + 1 + m \end{aligned} \right\} \rightarrow$$

2

$$k-1 = 1+m \rightarrow k-m = 2$$

$$AB = \sqrt{\underbrace{(-1-\mu)}_{-1}^2 + \underbrace{(k-m)}_{2}^2} = \sqrt{1+4} = \sqrt{5}$$

$$S = AB^2 = (\sqrt{5})^2 = 5$$



$$x_A + x_C = x_B + x_D \Rightarrow$$

$$-1 + x = 1 - x \Rightarrow$$

$$2x = 2 \rightarrow x = 1$$

$$\text{مسألة } ABCD \rightarrow BC \perp AB \rightarrow m_{AB} = -\frac{\mu}{k} \rightarrow m_{BC} = \frac{k}{\mu}$$

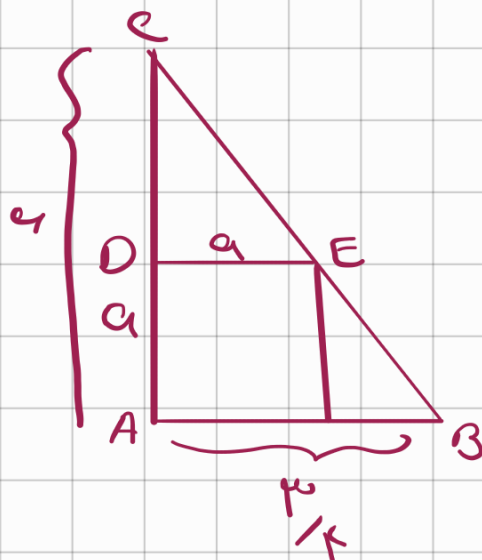
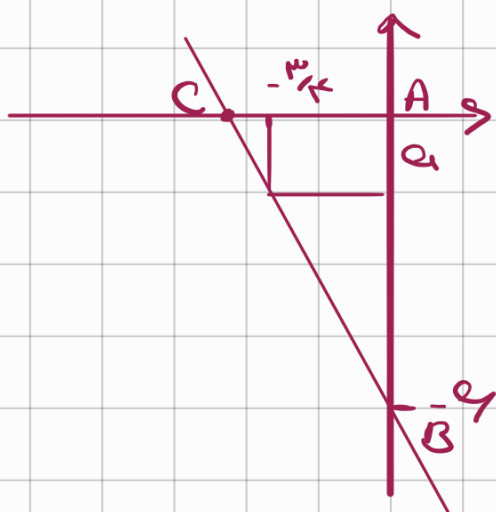
$$\frac{k}{\mu} = \frac{y-1}{\frac{\mu}{\mu}-\mu} \rightarrow y-1 = \frac{k}{\mu}x - \frac{\mu}{\mu} \rightarrow y = 1$$

$$A(-1, 2), B(1, 1), C(\frac{\mu}{k}, 1), D(-\frac{\mu}{k}, 2)$$

$$AB = \sqrt{k^2 + \mu^2} = \omega, \quad BC = \sqrt{1^2 + (\frac{\mu}{k})^2} = \frac{\omega}{\mu}$$

$$S = 2(AB + BC) = 2(\omega + \frac{\omega}{\mu}) = 10$$





$\leftarrow q$

(5)

مربع ADEF $\rightarrow AB \parallel DE \xrightarrow{\text{ثبات المثلثات}} \frac{AD}{AC} = \frac{DE}{AB}$

$$\Rightarrow \frac{c-a}{c} = \frac{a}{\frac{\pi}{k}} = \frac{\pi a}{\pi} \Rightarrow 1 - \frac{a}{c} = \frac{\pi a}{\pi}$$

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

المربع = $a\sqrt{\pi} = \frac{\pi\sqrt{\pi}}{\pi}$

$$\begin{cases} ay - x = a - 1 \\ y - ax = 1 \end{cases} \rightarrow \begin{cases} y = \frac{x}{a} + \frac{a-1}{a} \\ y = ax + 1 \end{cases} \xrightarrow{\text{مساواة}} \frac{1}{a} = a \rightarrow a^2 = 1 \rightarrow a = \pm 1$$

$$\xrightarrow{a=1} y = x \rightarrow y = x + 1 \quad (1, 2) \quad \checkmark$$

$$\Rightarrow a = 1$$

$$\xrightarrow{a=-1} y = -x + 1, y = -x + 1 \quad (1, 2) \quad \times$$

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$$y = \frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{1}{\sqrt{\pi}} = \frac{\sqrt{\pi}}{\pi} \rightarrow \omega = \sqrt{\pi^2 + \pi^2} \rightarrow \pi\omega = \pi^2 + \left(\frac{\sqrt{\pi}}{\pi}\right)^2$$

$$\rightarrow \pi^2 = \frac{\pi a}{\pi} \rightarrow \pi = \frac{\sqrt{\pi}}{\pi} \rightarrow S = \pi y \rightarrow \frac{\sqrt{\pi}}{\pi} \times \frac{\sqrt{\pi}}{\pi} = \frac{\pi}{\pi}$$

$$x - y = 1 \Rightarrow y = x - 1 \Rightarrow y = \frac{1}{3}x - \frac{1}{3} \quad A(1, 0) \quad B\left(\frac{4}{3}, \frac{1}{3}\right) \leftarrow 1$$

$$d = \frac{|x-1|}{\sqrt{1+9}} = \frac{3\sqrt{10}}{10}$$

9

$$m_{AC} = -3 \rightarrow y = -3(x-1) = -3x+3$$

$$C \rightarrow \frac{1}{3}x - \frac{1}{3} = -3x+3 \rightarrow \frac{10}{3}x = \frac{10}{3} \rightarrow x = 1, y = 0$$

$$\begin{bmatrix} 3, 1 & 1 & 1 \\ 0, 9 & 0 & 0 \\ 1 & 1 & 1 \end{bmatrix} \rightarrow 0, 9 - 3, 9 = -3, 9$$

$$S = \frac{1}{3} \times 3, 9 = 1, 3$$

$$m = \frac{b-a}{-\frac{1}{3} - (-\frac{1}{3})} = \frac{b-a}{\frac{1}{3}} = \sqrt{3} \rightarrow b-a = \frac{\sqrt{3}}{2} \leftarrow 9$$

9

$$a = \sqrt{\underbrace{\left(-\frac{1}{3} - (-\frac{1}{3})\right)^2}_{\frac{1}{9}} + \underbrace{(b-a)^2}_{\frac{3}{4}}} \rightarrow \frac{1}{3} = \frac{\sqrt{3}}{2}$$

$$\frac{\sqrt{3}}{2}$$

$$مسافة = \int_{A(-3, -3)} = \sqrt{3^2 + 3^2} = 3\sqrt{2}$$

10

$$m_{OA} = \frac{3}{3} \rightarrow m_{\ell} = -\frac{3}{3}$$

$$\left. \begin{array}{l} OA \perp l \\ l' \perp l \end{array} \right\} \rightarrow OA \parallel l' \Rightarrow m_{l'} = \frac{r}{R}$$

$$OA \rightarrow y = \frac{r}{R} x \quad l' \Rightarrow y = \frac{r}{R} x + c$$

$$l' \perp OA_{\text{mov}} \Rightarrow r = \omega \Rightarrow \frac{c}{\sqrt{1 + \left(\frac{r}{R}\right)^2}} = \frac{r\omega}{\omega} = \omega$$

$$\rightarrow c = \frac{r\omega}{R}$$

$$l' \rightarrow y = \frac{r}{R} x + \frac{r\omega}{R}, \quad l \rightarrow y + R = \frac{r}{R} (x + R) \\ \Rightarrow y = -\frac{r}{R} x - \frac{r\omega}{R}$$

$$\Rightarrow \left(\frac{r}{R} x_B + \frac{r\omega}{R} = -\frac{r}{R} x_B - \frac{r\omega}{R} \right) \times 12$$

$$\rightarrow 12x_B + 100 = -12x_B - 100 \Rightarrow 24x_B = -200 \rightarrow x_B = -\frac{25}{3}$$

$$y_B = -\frac{r}{R} x_B + \frac{r\omega}{R} = -1$$

$$x_B \times y_B = -1 \times -1 = 1$$