

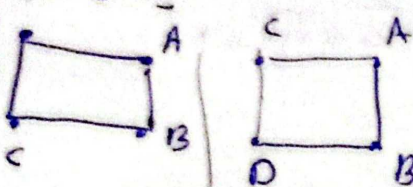
$$m = \frac{\Delta y}{\Delta x} = \frac{k-m}{-r-f} = -\frac{1}{r} \Rightarrow y = rk - rm = \boxed{r = k-m}$$

$$\boxed{} \Rightarrow \text{فاصله} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{\left(\frac{k-(-r)}{r}\right)^2 + \frac{(m-k)^2}{(-r)^2}}$$

$$= \sqrt{r^2 + 9} = \sqrt{r^2 + 9}$$

$$S = (\text{مساحت}) = \frac{1}{2} \times \text{طول} \times \text{عرض} = \frac{1}{2} \times \sqrt{r^2 + 9} \times \sqrt{r^2 + 9} = \boxed{r^2 + 9}$$

مسئله در مختصات



$$x_A + x_C = x_B + x_D$$

$$-1 + x = r - 1 - x$$

$$2x = r - 2 \Rightarrow x = \frac{r-2}{2}$$

$$x_A + x_D = x_B + x_C$$

$$-1 - 1 - x = r + x$$

$$-2 - x = r + x$$

$$-2 = r + 2x$$

$$x = \frac{-r-2}{2}$$

$$y_A + y_C = y_B + y_D$$

$$f + y = 1 + y + r = f + y$$

همواره برقرار

$$y_A + y_D = y_B + y_C$$

$$r + y + r = y + 1$$

$$2r + y = y + 1$$

$$2r = 1$$

همیشه درست نیست

$$AB = \sqrt{(x_A - x_B)^2 + (y_A - y_B)^2} = \sqrt{\left(-1 - \frac{r-2}{2}\right)^2 + (f - y)^2}$$

$$= \sqrt{\left(\frac{-2-r+2}{2}\right)^2 + (f-y)^2} = \sqrt{\frac{r^2}{4} + (f-y)^2}$$

$$m_{AB} = \frac{\Delta y}{\Delta x} = \frac{f-1}{-1-r} = -\frac{r}{f}$$

$$m_{BC} = \frac{r}{f}$$

$$AB \parallel CD \wedge AD \parallel BC \Rightarrow \text{موازی}$$

$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{r}{f} = \frac{y-1}{\frac{r}{f} - \frac{r}{f}} = \frac{y-1}{0}$$

$$-y = r - r \Rightarrow r = 0$$

$$\Rightarrow \boxed{y = -1}$$

$$L_{AB} = 2\left(\frac{0}{r} + 0\right) = \boxed{15}$$

$$rmx + (m^2 - 1)y = r$$

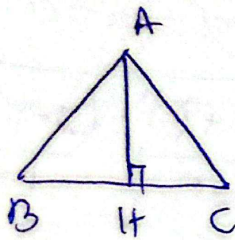
$\frac{1}{m} = \frac{-x_1 - y_1}{y_1 - x_1} = \frac{-rm}{m^2 - 1} = \sqrt{r} \Rightarrow \sqrt{r}m^2 - \sqrt{r} = -rm \Rightarrow \sqrt{r}m^2 + rm - \sqrt{r} = 0$

$$\Delta = b^2 - 4ac = (\sqrt{r})^2 - 4 \times \sqrt{r} \times -\sqrt{r} = r + 4r = 5r \Rightarrow \sqrt{\Delta} = \sqrt{5r} = \sqrt{5} \sqrt{r}$$

$$m = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-\sqrt{r} \pm \sqrt{5r}}{2\sqrt{r}} \Rightarrow \frac{-\sqrt{r} + \sqrt{5r}}{2\sqrt{r}} = \frac{-1 + \sqrt{5}}{2} = \frac{1}{\sqrt{r}} \Rightarrow \boxed{\frac{\sqrt{r}}{r}}$$

$$\frac{-r - \sqrt{r}}{2\sqrt{r}} = \frac{-1 - \sqrt{5}}{2} = -\frac{1 + \sqrt{5}}{2} \times \frac{\sqrt{r}}{\sqrt{r}} = \boxed{-\sqrt{r}}$$

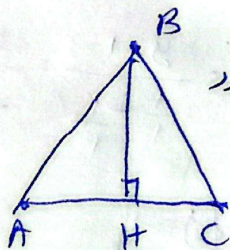
$$\text{المعادلة } \Rightarrow \frac{\sqrt{r}}{r} - (-\sqrt{r}) = \frac{\sqrt{r}}{r} + \sqrt{r} = \boxed{\frac{r\sqrt{r}}{r}}$$



$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{11 - r}{r - r} = \frac{1}{r} = r$$

$$y = rx + b \xrightarrow{(r, r)} r = r \times r + b \Rightarrow \boxed{b = -r}$$

$$BC \text{ إلى } A \text{ المسافة} = \frac{|y - rx + r|}{\sqrt{a^2 + b^2}} = \frac{9 - r \times 1 + r}{\sqrt{a^2 + b^2}} = \frac{9 - r + r}{\sqrt{a^2 + b^2}} = \frac{9}{\sqrt{a^2 + b^2}} = \frac{12}{\sqrt{a^2 + b^2}} = \frac{dx}{r} = \boxed{\sqrt{a}}$$



المعادلة
المعادلة من B
المعادلة

AB, BC

B | r

$$AB: y + rx = v \Rightarrow ry - rx = -12 \quad \text{①}$$

$$BC: ry - va = -14$$

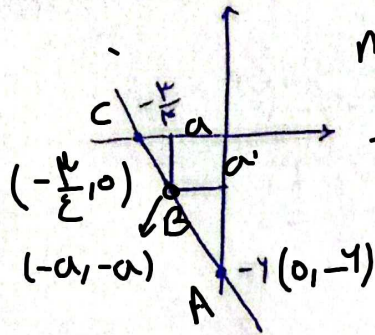
$$\Rightarrow -11r = -r^2 \Rightarrow r = r \Rightarrow y + \frac{rx}{r} = v \Rightarrow y = 1$$

$$AC: ry - rx = 14$$

$$\frac{|ry - rx - 14|}{\sqrt{a^2 + b^2}} = \frac{|r \times 1 - r \times r - 14|}{\sqrt{a^2 + b^2}} = \frac{r^2}{a} = \frac{r}{b} \Rightarrow \boxed{\frac{r}{b}}$$

$$m_{AC} = \frac{\Delta y}{\Delta x} = \frac{0 - (-4)}{-\frac{4}{3} - 0} = \frac{4}{-\frac{4}{3}} = -3$$

② خط مماس هاندانورد



$$m_{AC} = m_{AB}$$

$$-3 = \frac{-4 - (-a)}{0 - (-a)} = \frac{-4 + a}{a} = -1$$

$$\begin{aligned} -3a &= a - 4 \\ -4a &= -4 \Rightarrow a = \frac{4}{4} = 1 \end{aligned}$$

$$\text{فاصله} = \sqrt{a^2 + d^2} = a\sqrt{2} = \frac{4}{3}\sqrt{2}$$

مثال
 $a=1$ $y=x$ $y=x+1$
 $y-x=0$ $y-x-1=0$
 $ay-x=a-1$ و $y-ax=1$

$$\text{فاصله} \Rightarrow \frac{a}{1} = \frac{-1}{-a} \neq \frac{a-1}{1}$$

$$\Rightarrow a^2 = 1 \Rightarrow a = \pm 1 \Rightarrow \frac{1}{1} = \frac{-1}{-1} \neq \frac{0}{1} \checkmark$$

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

(1, 2) $y=x+1 \Rightarrow a=1$
 قابل مقبول
 روی اول و دوم قرار خط نیست

$a=-1$ $y+x-1=0$
 $-y-x=-1$ $y+x-1=0$
 $-y-x-1=0$
 $-y-x-1=0$

$$\text{فاصله} = \frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|0-(-1)|}{\sqrt{1^2+1^2}}$$

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

$$a=-1 \Rightarrow \frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|0-(-1)|}{\sqrt{1^2+1^2}} = \frac{1}{\sqrt{2}}$$

فاصله خط
 فاصله نقطه
 فاصله خط
 $\text{فاصله} = \sqrt{(a \cdot \text{طول})^2 + (b \cdot \text{عرض})^2} = d = \sqrt{\left(\frac{1}{\sqrt{2}}\right)^2 + (c)^2}$

$$\frac{1}{2} - \frac{1}{2} = c^2 \Rightarrow \frac{1}{2} = c^2 \Rightarrow c = \frac{\sqrt{2}}{2}$$

مثال $S = \text{طول} \times \text{عرض} = \frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{2} = \frac{1}{2} = 0.5$

①

$A(1,0)$

 $B(\frac{1}{2}, \frac{1}{2})$
 $C(1,1)$
 $m_{BC} = \frac{1 - \frac{1}{2}}{1 - \frac{1}{2}} = \frac{\frac{1}{2}}{\frac{1}{2}} = 1$
 $m_{AB} \times m_{BC} = -1 \Rightarrow m_{AB} = -1$
 $y = -x + b \xrightarrow{(1,0)} 0 = -1 + b \Rightarrow b = 1$
 $y = -x + 1$
 $x - y = 1 \Rightarrow x - 0.9 = 1 \Rightarrow x = 1.9$
 $x = 1.9$

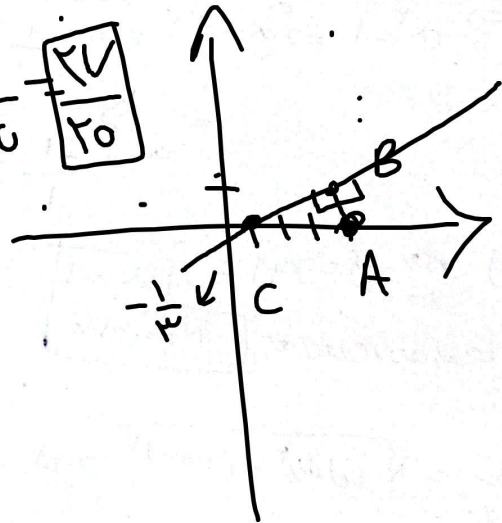
$\Rightarrow 1.9 = 1.9 \Rightarrow y = 0.9$
 $x - y = 1 \Rightarrow x - 0.9 = 1 \Rightarrow x = 1.9$
 $x = 1.9$

$x - y - 1 = 0 \xrightarrow{y=0} x = 1$

$S = \frac{1}{2} AC \times BH = \frac{1}{2} \times 1.9 \times 0.9 = \frac{1.71}{2}$

$AC = \sqrt{(x_A - x_C)^2 + (y_A - y_C)^2} = 1$
 $(1 - 1)^2 + (0 - 1)^2 = 1$

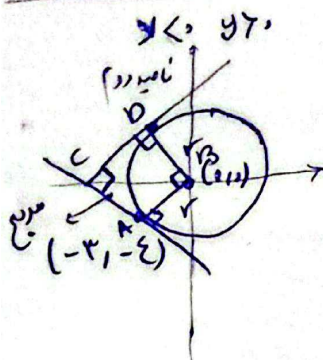
$BH = y_B = 0.9$



$$m = \frac{\Delta y}{\Delta x} = \sqrt{x} = \frac{b-a}{-\frac{1}{x} - (-\frac{1}{x})} = \frac{b-a}{\frac{-1}{x} + \frac{1}{x}} = \frac{b-a}{\frac{1}{y}} = \sqrt{x} \Rightarrow y(b-a) = \sqrt{x} \Rightarrow \boxed{b-a = \sqrt{x}}$$

$$|\vec{a}| = \sqrt{(\dot{x})^2 + (\dot{y})^2} = \sqrt{r(\dot{\theta})^2} = \dot{\theta} \sqrt{r} = \frac{1}{r} \times v r = \frac{\sqrt{r}}{r}$$

مسئله = $\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} = \sqrt{\left(-\frac{1}{4} - \left(-\frac{1}{4}\right)\right)^2 + (b-a)^2}$
 $= \sqrt{\frac{\kappa}{\kappa_4}} = \frac{\kappa}{4} = \boxed{\frac{1}{\kappa}}$



$$r = \rho' = \sqrt{(x_1 - 0)^2 + (y_1 - 0)^2} = \sqrt{\underbrace{(-3-0)^2}_{x^2} + \underbrace{(-5-0)^2}_{y^2}} = d$$

$$AB \parallel CD \Rightarrow m_{AB} = m_{CD} \Rightarrow \frac{\Delta y}{\Delta x} = \frac{0 - (-f)}{0 - (-r)} = \frac{k}{r}$$

$$y = \frac{k}{x} + b \xrightarrow{(0,1)} \boxed{y = \frac{k}{x}}$$

$$0 = 0 + b \Rightarrow \boxed{b = 0}$$

$$b(D) \stackrel{y=}{=} \frac{f}{f} x + b \Rightarrow r_y = f x + r_b \Rightarrow r_y - f x - r_b = 0$$

فصلی نقلی B از این
فد

$$\frac{|x_1 - x_0 - \tau b|}{\sqrt{\tau^2 + (-\xi)\tau}} = \frac{|x_0 - x_0 - \tau b|}{\sigma} = \sigma = \tau |b| = \tau \sigma$$

$$\text{If } b = \frac{r\delta}{r} \Rightarrow \boxed{b = \frac{r\delta}{r}}$$

$$3b = -2\sigma \Rightarrow b = \frac{-2\sigma}{3}$$

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

$$\frac{P}{P} \times MAC = -1 \Rightarrow MAC = -\frac{P}{P}$$

$$\text{So } y = -\frac{r}{r}x + b \Rightarrow \underbrace{-\frac{r}{r}x - r + b}_{\frac{a}{r}} = -2 \Rightarrow b = -\frac{r}{r} - \frac{a}{r} = \boxed{\frac{-r-a}{r}}$$

$$\Rightarrow y = -\frac{r}{k}x - \frac{r\sigma}{k}$$

موجودہ
AC, CD

$$\Rightarrow y = -\frac{r}{z}x - \frac{r\sigma}{z} \Rightarrow y = -rx - r\sigma$$

$$(12y - 14x - 10 = 0) \quad \text{---} \quad (1)$$

$$F_y + \overbrace{F_x - V}^{-\gamma_1} + \gamma_2 = 0$$

$$\boxed{-1x - V = V} \quad k_y = -k \Rightarrow y = -1$$

$$K_{OX} + W_0 = ?$$

$$V_D \approx 1.75$$

$$x_0 = -\frac{1.5}{k_d} \sqrt{-V}$$