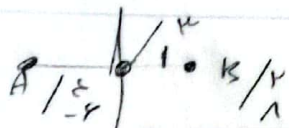


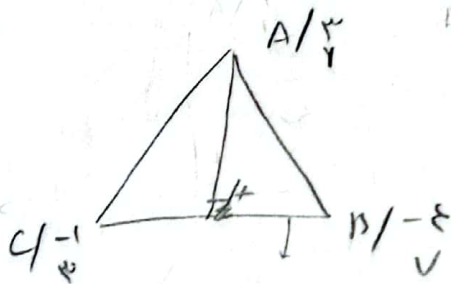
پیدا کردن: یار هم دست A



$$M_{AB} = -1 \quad y_{AB} = -x + 3$$

$$y = \frac{1}{-1}x + \frac{3}{-1}$$

$$\begin{pmatrix} 1 & 3 & -1 \\ -1 & -1 & -1 \\ -2 & -2 & 1 \\ -1 & 3 & 1 \end{pmatrix} \rightarrow \begin{pmatrix} 1 & 3 & -1 \\ 0 & 2 & -2 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

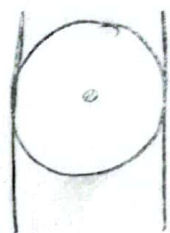


$$BC = \sqrt{Dx^2 + Dy^2} = \sqrt{(-1-1)^2 + (-2-1)^2} = \sqrt{10}$$

$$S = \begin{vmatrix} 1 & 1 & 1 \\ -1 & -1 & -1 \\ -2 & -2 & 1 \end{vmatrix} \times \frac{1}{2} = \frac{1}{2}$$

$$\frac{AH \times BC}{2} = S \rightarrow AH = \frac{1}{\sqrt{10}}$$

$$BC - AH = \frac{1}{\sqrt{10}}$$

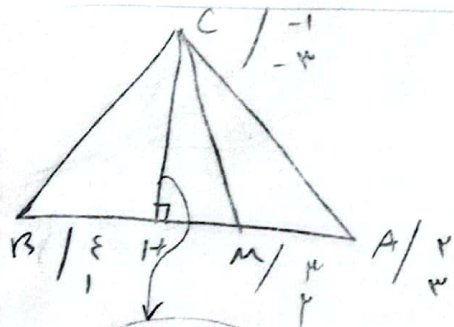


$$d = \frac{|C - C'|}{\sqrt{Dx^2 + Dy^2}} = \frac{1}{\sqrt{10}} \left(\frac{1}{\sqrt{10}} \right)$$

دو خط موازی اند $a = 2$

وفاصله این دو خط برابر قطر است

$$r = \frac{1}{\sqrt{10}} \rightarrow S = \frac{1}{2} \pi r^2$$



$$M_{AB} = -1 + 0$$

$$-1 + 0 = -1$$

$$V = 1 \rightarrow u = \frac{1}{\sqrt{10}}$$

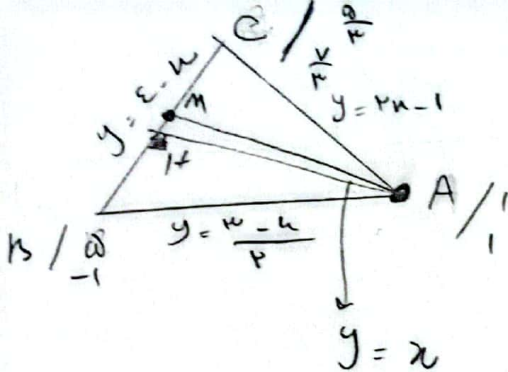
$$MH = \sqrt{\frac{1}{10} + \frac{1}{10}} \rightarrow \sqrt{\frac{2}{10}}$$

$$(1-m)x + (2-m)y - 1 = 0 \rightarrow \frac{-1-m+2}{2-m}$$

$$(m+1)x - (1-m)y + 1 = 0 \rightarrow \frac{m+1}{1-m} \Rightarrow \frac{-1-m+2}{2-m} \times \frac{m+1}{1-m} = -1$$

$$\frac{-1-m+2}{-1-m+2} = -1 \rightarrow -1-m+2 = 1-m+2$$

$$0 = 0 \rightarrow \Delta < 0$$



$$A \rightarrow \vec{a} \rightarrow \mu u - \mu = \mu - u \rightarrow u = 1$$

$$B \rightarrow \mu - \mu u = \mu - u \rightarrow u = 0$$

$$C \rightarrow \mu u - 1 = \epsilon - u \rightarrow u = \frac{a}{\mu}$$

$$M \rightarrow \vec{a} = \frac{10}{\mu}$$

$$AM = \sqrt{\frac{\epsilon a}{a} + \frac{1}{a}} \rightarrow \sqrt{\frac{0}{a}}$$

$$H \rightarrow \frac{1}{\mu}$$

$$AH = \sqrt{\mu}$$

$$\frac{AM}{AH} = \frac{\frac{0 \sqrt{\mu}}{\mu}}{\frac{\sqrt{\mu}}{1}} = \frac{0}{1}$$

$$y = -\frac{1}{\mu} u + \epsilon \rightarrow \mu y + u - \mu \epsilon = 0$$

$$y = -\frac{1}{\mu} u + \epsilon \xrightarrow{y=0} y = 0 \quad \mu = 0$$

$$\xrightarrow{y=0} u = 1 \quad \mu = 0$$

$$d = \frac{|ax + by + c|}{\sqrt{a^2 + b^2}} = \frac{|\mu \epsilon|}{\sqrt{\mu}} = \sqrt{\mu} \epsilon$$

$$\boxed{d = \epsilon}$$

$$d = \sqrt{a^2 u^2 + b^2 y^2} = \sqrt{1 \cdot \epsilon^2}$$

$$y = \frac{\epsilon}{\mu} u + \epsilon$$

$$(1-m)u + \epsilon = \frac{\epsilon}{\mu} u + \epsilon \rightarrow 1-m = \frac{\epsilon}{\mu} \rightarrow m^2 - m - \epsilon = 0$$

$$y = (1-m)u + \epsilon$$

$$u = -\frac{m}{\mu}$$

$$u = 0 \rightarrow (0, \epsilon)$$

$$h = \mu : \text{داریم دو نقطه بر روی خط } y = \epsilon$$

$$\left| \frac{\epsilon}{1-m} + \frac{m}{\mu} \right| = \frac{\epsilon}{\mu} \rightarrow m = -\epsilon \pm \sqrt{\epsilon}$$

$$S = \frac{1}{\mu} \left| \frac{\epsilon}{1-m} + \frac{m}{\mu} \right| = \frac{\epsilon}{\mu}$$

$$y = \mu u - \mu$$

$$y = \mu u - \mu \rightarrow u = \frac{y + \mu}{\mu}$$

$$y = \mu u - \mu$$

$$\boxed{y = \mu u - \mu}$$

$$y_{AA'} = -x + \mu$$

$$-u + \mu = u + \mu \rightarrow u = -1 \rightarrow y = \epsilon$$

$$A' = \begin{pmatrix} -\mu & a \\ \mu & b \end{pmatrix} \quad b - a = \mu + \mu = 1 \quad \boxed{a}$$

