

سازمانی یازدهم خرداد ۱۴۰۰

$$m_{AB} = \frac{1 - (-4)}{2 - 4} = -\frac{5}{2} = -2.5 \xrightarrow{\text{عکس و قرینه}} m = \frac{1}{2.5}$$

$$m \begin{cases} \frac{r+k}{r} = 2 \\ \frac{1-4}{r} = 1 \end{cases}$$

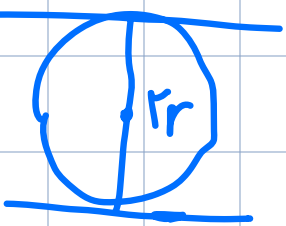
$$y - 1 = \frac{1}{2.5}(x - 2) \rightarrow y = \frac{1}{2.5}x + \frac{4}{2.5}$$

$$BC = \sqrt{\underbrace{(-4 - (-1))^2}_9 + \underbrace{(2 - 2.5)^2}_{0.25}} = 2$$

$$m_{BC} = \frac{2 - 2.5}{-4 - (-1)} = \frac{-0.5}{-3} = \frac{1}{6} \rightarrow y - 2.5 = \frac{1}{6}(x + 4) \rightarrow$$

$$y = \frac{1}{6}x + \frac{17}{6} \xrightarrow{\times 6} 6y + 17 = x \rightarrow x - 6y - 17 = 0 \quad AH = \frac{|r(1) + r(2) - d|}{\sqrt{r^2 + r^2}} = 2$$

$$BC = \sqrt{r^2 + r^2} = 2 \quad BC - AH = 2 - 2 = 0$$



$$y - 2.5 - 2 = 0$$

$$y - \frac{1}{6}x - 1 = 0 \rightarrow y - x - 1 = 0$$

$$r = \frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{|-1 - (-2.5)|}{\sqrt{1 + 1}} = \frac{1.5}{\sqrt{2}} \rightarrow$$

$$r = \frac{r}{\sqrt{a}} \quad S = \pi \times \left(\frac{r}{\sqrt{a}} \right)^2 \rightarrow S = \frac{a}{4} \pi$$

$$M \left| \begin{array}{l} \frac{r+r}{r} = r \\ \frac{r+1}{r} = r \end{array} \right. \quad m_{AB} = \frac{r-r}{1-r} = -1 \rightarrow m_{CH} = 1$$

$$y+r=1(n+1) \rightarrow y=n-r$$

$$y-r=-1(n-1) \rightarrow y=-n+d$$

$$n-r=-n+d \rightarrow 2n=d \rightarrow n=\frac{d}{2} \quad y=\frac{r}{2}$$

$$MH = \sqrt{\left(r - \frac{d}{2} \right)^2 + \left(r - \frac{r}{2} \right)^2} = \frac{\sqrt{r}}{2}$$

$$\frac{-a}{b} = \frac{-(n+1)}{-(r_n-r)} = \frac{n+1}{r_n-r} \xrightarrow{\text{کلی و قسری}} -d$$

$$\frac{-r_n+r}{d-n} = -\frac{r_n+r}{n+1} \Rightarrow -r_n^2 - r_n + r_n + r = -10n + r_n^2 + r_0 - r_n$$

۲۱. در خط زیر تاندهای را بنویسید

$$\Delta m^2 - 1^2 m + 1 \Delta = 0$$

$$\Delta < 0$$

-4

$$\begin{cases} AB: m + r y = r \rightarrow y = -\frac{1}{r} m + \frac{r}{r} \\ AC: y = r m - 1 \\ BC: m + y = r \rightarrow y = -m + r \end{cases}$$

$$-\frac{1}{r} m + \frac{r}{r} = r m - 1 \rightarrow \frac{d}{r} m = \frac{d}{r} \rightarrow m_A = 1, y_A = 1$$

$$-m + r = -\frac{1}{r} m + \frac{r}{r} \rightarrow \frac{1}{r} m = \frac{d}{r} \rightarrow m_B = d, y_B = -1$$

$$r m - 1 = -m + r \rightarrow r m = d \rightarrow m_C = \frac{d}{r}, y_C = \frac{r}{r}$$

$$m \left| \begin{array}{l} \frac{d + \frac{d}{r}}{r} = \frac{10}{r} \\ \frac{\frac{r}{r}}{r} = \frac{r}{r} \end{array} \right.$$

$$AM = \sqrt{\left(\frac{1}{r}\right)^2 + \left(\frac{r}{r}\right)^2} = \sqrt{\frac{d^2}{9}} = \frac{d\sqrt{r}}{r}$$

$$AH = \frac{|1 + 1 - r|}{\sqrt{r}} = \frac{r}{\sqrt{r}} = \sqrt{r} \quad \frac{AM}{AH} = \frac{\frac{d\sqrt{r}}{r}}{\sqrt{r}} = \frac{d}{r}$$

$$y = -\frac{1}{r} m + b \rightarrow \frac{1}{r} m + y - b = 0 \quad a = \frac{1}{r} \quad b = 1 \quad C = -b \quad -V$$

$$\sqrt{r} = |1 - b| = |b| \rightarrow 1 - b = b \rightarrow y = 1 - b$$

$$\frac{\sqrt{\left(\frac{1}{r}\right)^2 + r^2}}{\frac{\sqrt{a}}{r}} = \frac{\sqrt{a}}{r} \Rightarrow b = a \Rightarrow y = -\frac{1}{r}x + a$$

$$\frac{1}{r}a = a \rightarrow a = 1, \quad B(1, 0) \quad AB = \sqrt{(1-0)^2 + (0-a)^2} = a\sqrt{a}$$

$$\left. \begin{aligned} my - rx = r \Rightarrow y = \frac{r}{m}x + r \\ y + mx = x + r \Rightarrow y = (1-m)x + r \end{aligned} \right\} \text{نقطه برخورد: } (0, r) \quad -1$$

$$y_B = \frac{r}{m}x_B + r, \quad y_B = 0 \Rightarrow \frac{r}{m}x_B = -r \Rightarrow x_B = -\frac{m}{r} \Rightarrow y_B = 0$$

$$y_C = (1-m)x_C + r, \quad y_C = 0 \Rightarrow 0 = (1-m)x_C + r \Rightarrow (1-m)x_C = -r$$

$$\Rightarrow x_C = \frac{r}{m-1}, \quad y_C = 0 \rightarrow A(0, r), \quad B\left(-\frac{m}{r}, 0\right), \quad C\left(\frac{r}{m-1}, 0\right)$$

$$oxb = \left| \frac{r}{m-1} + \frac{m}{r} \right| = \frac{a}{r} \rightarrow \left| \frac{r+m^2-m}{r(m-r)} \right| = \frac{a}{r} \quad \textcircled{1} \textcircled{2}$$

$$\textcircled{1} \frac{m^2-m+r}{r(m-1)} = \frac{a}{r} \Rightarrow m^2-m+r = am-a \rightarrow m^2-4m+9=0 \rightarrow m=r$$

$$\textcircled{2} \frac{m^2-m+r}{r(m-1)} = -\frac{a}{r} \rightarrow -2m+a = m^2-m+r \rightarrow$$

$$m^2+r(m-1)=0 \rightarrow \rho = -1 \quad \text{مقادیر} = -1 \times r = -r$$

$$d: y = r_m - r$$

$$dp: y = r_m - C$$

$$dr: y = r_m - \frac{C+r}{r}$$

$$-r = r - \frac{C+r}{r} \Rightarrow \frac{C+r}{r} = r$$

$$C+r = r^2 \Rightarrow C = r$$

$$\underline{y = r_m - r}$$

$$md = 1 \quad m_{AA'} = -1 \quad y - y_A = -1(n - n_A) \Rightarrow y - r = -n + 1$$

$$y = -n + r$$

$$n + \Delta = -n + r \rightarrow r_m = -r, n = -1, y = r$$

$A, A' \text{ bzw. } m$

$$m \left\{ \begin{array}{l} \frac{a+1}{r} = -1 \rightarrow a = -r \\ \frac{b+r}{r} = r \rightarrow b = r \end{array} \right. \quad \left. \begin{array}{l} \\ \end{array} \right\} r(b-a) = r - (-r) = \underline{2r}$$