

هم در دفتر B

محل بستان 14

$$A \begin{vmatrix} r & -4 \\ -4 & r \end{vmatrix} \quad B \begin{vmatrix} r & 1 \\ 1 & r \end{vmatrix}$$

محل محوری در این است

(1)

$$(B, A) M \begin{vmatrix} r+r & \\ -4+1 & \end{vmatrix} = \begin{vmatrix} 2r & \\ -3 & \end{vmatrix}$$

$$M \begin{vmatrix} r & \\ 1 & \end{vmatrix}$$

$$M_{AB} = \frac{1 - (-4)}{r - r} = \frac{1r}{-r} = -1$$

$$M \rightarrow \frac{1}{v}$$

$$y = \frac{1}{v}x + \frac{r}{v}$$

$$y - 1 = \frac{1}{v}(x - r) \Rightarrow y = \frac{x}{v} - \frac{r}{v} + 1 \Rightarrow y = \frac{x - r + v}{v} \Rightarrow y = \frac{x + r}{v} \Rightarrow vy = x + r$$

$$A \begin{vmatrix} r & \\ 1 & \end{vmatrix} \quad B \begin{vmatrix} -r & \\ v & \end{vmatrix} \quad C \begin{vmatrix} -1 & \\ r & \end{vmatrix}$$

BC قید شیب: $\frac{r}{AH}$ $\frac{r}{BC}$ $\frac{r}{AH}$ $\frac{r}{BC}$

(2)

$$BC \rightarrow \sqrt{(v-r)^2 + (-1-r)^2} = \sqrt{14+9} = 5$$

AH

$$M_{BC} \rightarrow \frac{v-r}{-r-(-1)} = \frac{r}{-r}$$

$$y_{BC} = -\frac{r}{v}x + b \xrightarrow{\begin{vmatrix} -1 & \\ r & \end{vmatrix}} \frac{r}{v} + b = 1$$

$$y_{BC} = -\frac{r}{v}x + \frac{d}{v}$$

$$BC \rightarrow \frac{r}{v} \quad y = \frac{r}{v}x + b \xrightarrow{\begin{vmatrix} r & \\ 1 & \end{vmatrix}} y \Rightarrow \frac{r}{v} + b = 1$$

$$b = 1 - \frac{r}{v} = -\frac{d}{v}$$

$$BC \rightarrow y = \frac{r}{v}x - \frac{d}{v}$$

$$H \rightarrow -\frac{r}{v}x + \frac{d}{v} = \frac{r}{v}x - \frac{d}{v} \Rightarrow \left(\frac{r}{v} + \frac{r}{v}\right)x = \frac{d}{v} + \frac{d}{v}$$

$$2dx = 2d \Rightarrow x = \frac{v}{d}$$

$$H \begin{vmatrix} v & \\ d & \\ -1 & \\ d & \end{vmatrix}$$

$$A \begin{vmatrix} r & \\ 1 & \end{vmatrix}$$

$$AH \rightarrow \sqrt{\left(r - \frac{v}{d}\right)^2 + \left(1 + \frac{1}{d}\right)^2} = \sqrt{\frac{4d}{r^2} + \frac{14}{r^2}} = \sqrt{r} = r$$

$$BC = d, AH = r \quad BC - AH = r$$

$$\text{if } x = \frac{v}{d} \quad y = \frac{r}{v} \times \frac{v}{d} - \frac{d}{v} = \frac{r-d}{v}$$

$$ry - x = v, \quad ry = ax + r$$

$$M = \frac{1}{r} \Rightarrow \frac{a}{r} = \frac{1}{r} \Rightarrow a = 1$$

$$ry - x = v$$

$$ry - rx - r = \dots \rightarrow y - x = 1$$

(3)

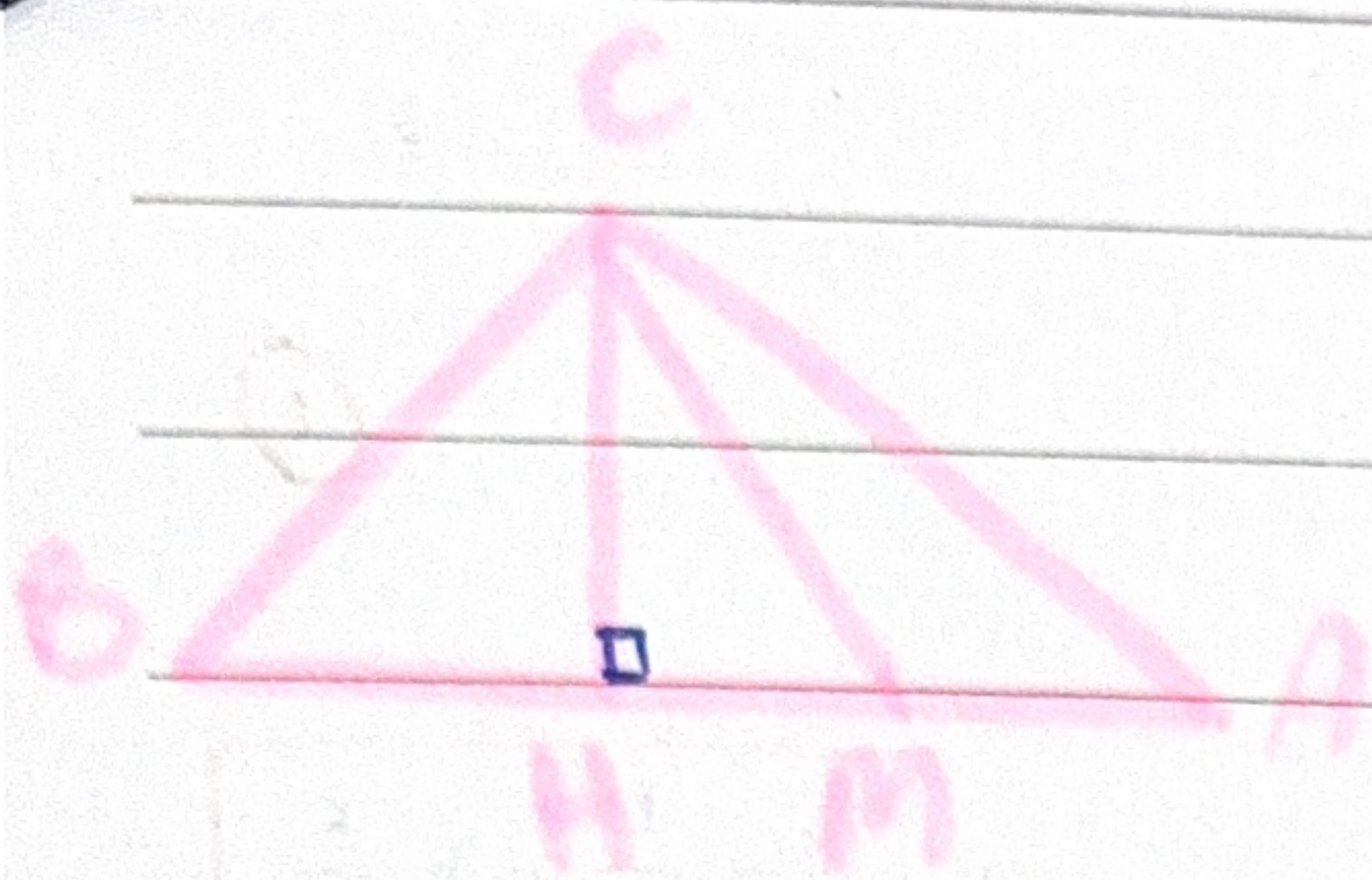
$$\frac{1}{2} \rightarrow \frac{-1 \pm \sqrt{1+1}}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

(4)

$$r = \frac{r}{\sqrt{d}}$$

$$S = \pi R^2 \Rightarrow S = \pi \left(\frac{r}{\sqrt{d}}\right)^2 \Rightarrow S = \frac{\pi r^2}{d}$$

$$\text{if } x = r \quad S = \frac{rv}{d} = \frac{d}{r}$$



$$\begin{array}{c|c} A & r \\ \hline M & \frac{r+r}{r} = r \\ & \frac{r+1}{r} = r \end{array} \quad \begin{array}{c|c} B & r \\ \hline M & r \end{array} \quad \begin{array}{c|c} C & -1 \\ \hline M & r \end{array}$$

(f)

H → $M_{AB} = \frac{r-1}{r-r} = \frac{r}{-r} = -1$ $y = -x + b$ $r = -r + b \Rightarrow b = d \Rightarrow y = -x + d$

AB → $m = 1$

C → $y = x + b$ $-r = -1 + b \Rightarrow b = -r \Rightarrow y = x - r$

H → $x - r = -x + d \Rightarrow rx = d \Rightarrow x = \frac{d}{r}$, if $x = \frac{d}{r} \Rightarrow y = \frac{d}{r} - r = \frac{d-r}{r}$

MH → $\sqrt{\left(\frac{r-d}{r}\right)^2 + \left(\frac{d-r}{r}\right)^2} = \sqrt{\frac{1}{r^2} + \frac{1}{r^2}} = \sqrt{\frac{2}{r^2}} = \frac{1}{\sqrt{r}} \Rightarrow \frac{\sqrt{r}}{r}$

$(m+1)x - (r_m - r)y + 1 = 0$, $(r_m - r)x + (d - m)y - d = 0$ $m = ?$

$\frac{-m-1}{-r_m+r} = \frac{-r_m+r}{d-m}$

$\frac{-m-1}{-r_m+r} \times \frac{-r_m+r}{d-m} = -1 \Rightarrow (r_m^2 - r_m + r_m - r) = (1 \cdot m - r_m^2 - r + \epsilon_m)$

$r_m^2 + m - r = -r_m^2 + 1 \epsilon_m - r$

$d m^2 - 1 r_m + 1 \epsilon_m = 0$

این (دو) جمله اولی هم عبارتند.

(g)

AB: $x + ry = r$, AC: $y = rx - 1$, BC: $x + y = r$

$\frac{AM}{AH}$

AC, AB → $y = r - x$ $\frac{r-x}{r} = rx - 1 \Rightarrow r - x = rx - r \Rightarrow dx = d \Rightarrow x = 1$ $A \begin{array}{c|c} & 1 \\ \hline & \end{array}$

A → $y = rx - 1$ if $x = 1 \Rightarrow y = 1$

B → $y = \frac{r-x}{r}$, $y = r - x$ $r - x = \frac{r-x}{r} \Rightarrow 1 - rx = \frac{r-x}{r} \Rightarrow x = d \rightarrow$ if $x = d \Rightarrow y = -1$ $B \begin{array}{c|c} & -1 \\ \hline & \end{array}$

AB, BC → $y = \frac{r-x}{r}$, $y = r - x$ $r - x = \frac{r-x}{r} \Rightarrow 1 - rx = \frac{r-x}{r} \Rightarrow x = \frac{d}{r} \rightarrow$ if $x = \frac{d}{r} \Rightarrow y = r - \frac{d}{r} = \frac{r-d}{r}$ $C \begin{array}{c|c} & \frac{d}{r} \\ \hline & \end{array}$

AC, BC → $y = r - x$ $r - x = rx - 1 \Rightarrow rx = d \Rightarrow x = \frac{d}{r} \rightarrow$ if $x = \frac{d}{r} \Rightarrow y = r - \frac{d}{r} = \frac{r-d}{r}$ $C \begin{array}{c|c} & \frac{d}{r} \\ \hline & \end{array}$

BC, AM → $\frac{(d+\frac{d}{r})}{r} \Rightarrow M \begin{array}{c|c} & \frac{1}{r} \\ \hline & \end{array}$

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

AH → $M_{BC} \Rightarrow y = r - x \Rightarrow m = -1 \Rightarrow \frac{AM}{AH} = 1$

AH → $y = x + b$ $b = 0 \Rightarrow H \rightarrow r - x = x \Rightarrow x = r$

$\frac{AM}{AH} = \frac{\frac{d\sqrt{r}}{r}}{\frac{d}{r}} = \frac{d}{r}$

$$M = -\frac{1}{r}$$

شیب: $\rightarrow \sqrt{r}$
 عرض: $\rightarrow \frac{1}{r}$

(v)

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

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

if $x = 0$, $y = r$, if $y = 0 \Rightarrow -\frac{1}{r}x = -r \Rightarrow x = r$

A: $\frac{1}{r}$, B: r

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

$\sqrt{r}$

$$my - Fx = Km$$

$$y + mx = x + r$$

$$y = \frac{Fx + Km}{m} \Rightarrow y = \frac{Fx}{m} + r$$

$$y = x + r - mx$$

$$y = x(1-m) + r$$

در این فرض از سود طلبی و ریسک

نقد به فروش $\frac{1}{r}$ است

(^)

$$y = \frac{Fx}{m} + r \quad \text{if } y = 0$$

$$y = x(1-m) + r \Rightarrow x(1-m) = -r \Rightarrow x = \frac{-r}{1-m}$$

$$\left| \frac{-r}{1-m} \right|$$

$$y = \frac{Fx}{m} + r$$

$$\frac{Fx}{m} = -r \Rightarrow x = -\frac{m}{r}$$

$$y = x(1-m) + r \quad \text{if } y = 0$$

$$\left| \frac{-m}{r} \right|$$

9

$$m \mid \begin{array}{c} r \\ -r \end{array} \Rightarrow y = rx - r$$

$$\hookrightarrow \text{if } x=1 \Rightarrow y=-1$$

$$\begin{array}{c} \mid \\ -1 \end{array} \quad \begin{array}{c} \mid \\ -r \end{array} \quad \begin{array}{c} \mid \\ -r \end{array}$$

$$y = rx + b \quad \begin{array}{c} \mid \\ -r \end{array} \quad -r = y + b \Rightarrow b = -9$$

$$\boxed{y = rx - 9}$$

$$A \mid \begin{array}{c} 1 \\ r \end{array}$$

$$y = x + d$$

$$A' \mid \begin{array}{c} a \\ b \end{array}$$

$$rb - a = ?$$

1.

$$\text{نقطة تقاطع} \hookrightarrow m = -1 \Rightarrow y = -x + b \quad \begin{array}{c} \mid \\ r \end{array} \quad r = -1 + b \Rightarrow b = r$$

$$y = -x + r$$

نقطة تقاطع

$$x + d = -x + r \Rightarrow rx = -r \Rightarrow x = -1, y = r$$

$$A \mid \begin{array}{c} 1 \\ r \end{array} \quad \begin{array}{c} \mid \\ -1 \end{array}$$

$$A' \mid \begin{array}{c} a \\ b \end{array}$$

$$\Rightarrow a = -r \Rightarrow rb - a$$

$$b = r$$

$$rx + y \in \mathbb{C} = 1d$$