

1) ~~AB~~ $y = -\sqrt{x} + 2 \rightarrow d: y = \frac{1}{\sqrt{x}} + b \xrightarrow{\text{نمیتوانیم}} 1, \frac{1}{\sqrt{x}} + b \rightarrow b = \frac{1}{\sqrt{x}}$

$$d: y = \frac{1}{\sqrt{x}} + \frac{1}{\sqrt{x}} \quad \text{نمیتوانیم} \quad \frac{\frac{1}{\sqrt{x}} + \frac{1}{\sqrt{x}}}{\frac{1}{\sqrt{x}} + \frac{1}{\sqrt{x}}}$$

2) $BC = \sqrt{9+16} = 5$ $BC: y = -\frac{4}{3}x + \frac{25}{3} \rightarrow 4y - 3x + 25 = 0 \rightarrow 4y + 3x + 25 = 0$
 $AH = \frac{|3+12-25|}{\sqrt{16+9}} = \frac{10}{5} = 2$ $BC - AH = 5 - 2 = 3$

3) $4y - 3x + 25 = 0$ $\frac{4}{3} = \frac{a}{-1} \rightarrow a = -\frac{4}{3} \rightarrow \begin{cases} 4y - 3x + 25 = 0 \\ 4y - 3x + 25 = 0 \end{cases} \rightarrow \begin{cases} 4y - 3x + 25 = 0 \\ 4y - 3x + 25 = 0 \end{cases}$
 $r = \frac{|12-25|}{\sqrt{16+9}} = \frac{13}{5} \rightarrow r = \frac{4}{5} = \frac{2}{\sqrt{5}} \rightarrow 5\pi r = \frac{4}{5}\pi$

4) $MH = \frac{|AC - BC|}{AB}$
 $\frac{AC}{BC} = \frac{3\sqrt{2}}{\sqrt{10+16}} = \frac{3\sqrt{2}}{5}$ $\frac{AB}{BC} = \frac{\sqrt{16+9}}{\sqrt{10+16}} = \frac{5}{5} = 1$ $\Rightarrow MH = \frac{|3\sqrt{2} - 5|}{5\sqrt{2}} = \frac{3}{5\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

5) $y = \frac{(m+1)}{m-1}x + \frac{1}{m-1} \leftrightarrow (m+1)x - y(m-1) + 1 = 0$

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

$f_1 \times f_2 = -1 \rightarrow \frac{m+1}{m-1} \times \frac{m-1}{m-1} = -1$

$\rightarrow -m^2 + 1 = m^2 - 1 \rightarrow 2m^2 = 2 \rightarrow m^2 = 1 \rightarrow m = \pm 1$
 $\rightarrow \Delta < 0 \rightarrow \text{دو جواب ندارد}$

6) $AB: AC \rightarrow A(1,1)$
 $2x + 3y = 4$
 $2x - y = 1$
 $\frac{2x + 3y = 4}{2x - y = 1} \rightarrow y = 1 \rightarrow x = 1$

$AB: BC \rightarrow B(2,1)$
 $2x + 3y = 4$
 $2x - y = 1$
 $\frac{2x + 3y = 4}{2x - y = 1} \rightarrow y = 1 \rightarrow x = 1$

$AC: DC$
 $2x - y = 1$
 $\frac{2x - y = 1}{2x - y = 1} \rightarrow y = \frac{1}{2}$

$C(\frac{d}{2}, \frac{1}{2})$
 $AM = \sqrt{(1-\frac{d}{2})^2 + (1-\frac{1}{2})^2} = \frac{\sqrt{5}}{2}$
 $AH = \frac{|1+1-1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$
 $\frac{AM}{AH} = \frac{\frac{\sqrt{5}}{2}}{\frac{\sqrt{2}}{2}} = \frac{\sqrt{5}}{\sqrt{2}} = \frac{\sqrt{10}}{2}$

v) $d: y = -\frac{1}{F}x + b$ } $\rightarrow \frac{|b|}{\frac{\sqrt{a}}{F}} \cdot d \rightarrow |b| \cdot d \rightarrow b \pm d$
 کی مقدار میں اضافہ

$$\begin{aligned} A(\alpha, 0) &\xrightarrow{d} 0 = -\frac{\alpha}{r} + b \rightarrow \alpha, r, b \\ B(0, \beta) &\xrightarrow{d} \beta = 0 + b \rightarrow \beta, b \end{aligned}$$

$$AB = \sqrt{\alpha^2 + \beta^2} = \sqrt{\sigma} |b|$$

$$\rightarrow AB = \sigma \sqrt{\sigma}$$

[illegible]

$$\Rightarrow \frac{\frac{m^2 - m + 1}{2} \times \frac{1}{2}}{2} \rightarrow \frac{\frac{m^2 - m + 1}{2} \times \frac{1}{2}}{2} \rightarrow \begin{cases} m^2 - m + 1 = 0 \rightarrow m = 1 \\ m^2 - m + 1 = 0 \rightarrow m = 0 \\ m^2 - m + 1 = 0 \rightarrow m = 1 \end{cases}$$

a) $d = y_2 \quad m = 2$
 نقطه $A(0, -2)$ مرکز A $\xrightarrow{\text{نسبت } m}$ $\left\{ \begin{aligned} & \left[\begin{array}{c} y_2 - 1 \\ y_2 - y_1 \end{array} \right] \cdot \left[\begin{array}{c} 1 \\ -1 \end{array} \right] \end{aligned} \right\} \Rightarrow \begin{aligned} & d = y_2 + b \\ & \rightarrow -1 = 2 + b \\ & \rightarrow b = -4 \end{aligned}$
 $m_d = m_{d'}$ $\rightarrow d = y = 2m - 4$

10) $Alt: y, -n+b \xrightarrow{A} r, -l+b \rightarrow b, \mu \rightarrow Alt: y, -n+\mu$ $\left. \begin{array}{l} \text{نقطة} \\ \text{دالة} \end{array} \right\} \xrightarrow{H} d: y, n+\omega$

$$\frac{\text{نقطهٔ تقاطع}}{+1} \quad -x+3, x+0 \rightarrow x, -1 \rightarrow y, 4$$

$$A' \left[\begin{array}{c} x_H - x_A \\ y_A - y_A \end{array} \right], \left[\begin{array}{c} -x \\ y \end{array} \right] \Bigg\} \begin{matrix} a = -x \\ b = y \end{matrix} \rightarrow [b-a, 1](-), (\odot)$$