

1. $A \begin{vmatrix} -1 \\ k \end{vmatrix} \quad B \begin{vmatrix} 1 \\ m \end{vmatrix}$ $y = \frac{1}{r}x + b \rightarrow -\frac{1}{r}x + b = m$ $\left. \begin{array}{l} -\frac{1}{r}x + b = m \\ -\frac{1}{r}x + b = k \end{array} \right\} \Rightarrow m + r = k \pm 1 \Rightarrow m - k = -r$

$d = \sqrt{(f-r)^2 + (mk)^2} = \sqrt{r^2 + 9} = \sqrt{f^2} \rightarrow S = f^2$

2. $A \begin{vmatrix} -1 \\ r \end{vmatrix} \quad B \begin{vmatrix} 1 \\ 1 \end{vmatrix} \quad C \begin{vmatrix} 1 \\ y \end{vmatrix} \quad D \begin{vmatrix} -1-x \\ y+r \end{vmatrix}$

$BC \rightarrow m = \frac{y-1}{x+1} \quad CD \rightarrow m' = \frac{-y}{x+1} \rightarrow mm' = -1 \rightarrow (x+1)(y-1) = -1$

$m_{AB} = m_{CD} \rightarrow x = \frac{r}{p}$

$|AB| = a$

$-ax + ry + y = 0$

$m_{AB} \times m_{CD} = -1 \rightarrow y = -1$

$|BC| = \frac{a}{r}$

$r(\frac{a}{r} + \frac{r}{p}) = 10$

3. $rmy + (m^2 + 1)y = r \rightarrow m = \tan 45^\circ = \sqrt{r}$

$\frac{-rm}{m^2+1} = \sqrt{r} \rightarrow \sqrt{r}m^2 + rm = \sqrt{r} \rightarrow m^2 + rm - 1 = 0 \rightarrow m = \frac{1}{\sqrt{r}} \quad m = \frac{r}{\sqrt{r}} = \sqrt{r}$

$\frac{f}{\sqrt{r}}$

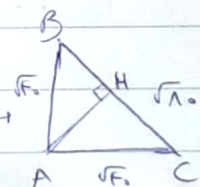
4. $A \begin{vmatrix} 1 \\ q \end{vmatrix} \quad B \begin{vmatrix} 1 \\ r \end{vmatrix} \quad C \begin{vmatrix} 1 \\ 1 \end{vmatrix}$

$AB \rightarrow \sqrt{2}$

$AC \rightarrow \sqrt{f_0}$

$BC \rightarrow \sqrt{10}$

$AB^2 + AC^2 = BC^2 \Rightarrow \sqrt{2}^2 + \sqrt{f_0}^2 = \sqrt{10}^2$



$\frac{\sqrt{f_0} \times \sqrt{f_0}}{r} = \frac{AH \times \sqrt{10}}{r}$

$f_0 = AH \sqrt{10}$

$\Rightarrow AH = \frac{10}{\sqrt{10}} = \sqrt{10}$

5. $AB: y + rx = v \quad AC: ry - rx = 14 \quad BC: ry - vx = -19$

$A \rightarrow ry + rx = v \Rightarrow ry - rx = -14 \rightarrow 11x = 11 \Rightarrow x = 1 \Rightarrow y = 2 \Rightarrow A \begin{vmatrix} 1 \\ 2 \end{vmatrix}$

$B \rightarrow ry + rx - 14 = ry - vx + 19 \Rightarrow 11x = 33 \Rightarrow x = 3 \Rightarrow y = 1 \Rightarrow B \begin{vmatrix} 3 \\ 1 \end{vmatrix}$

$C \rightarrow ry - vx = -19 \Rightarrow 11x = 22 \Rightarrow x = 2 \Rightarrow y = 1 \Rightarrow C \begin{vmatrix} 2 \\ 1 \end{vmatrix}$

$AC \rightarrow \frac{|-2+1-14|}{\sqrt{9+14}} = \frac{17}{5}$
 $BH = \frac{17}{5}$

6. $\frac{x}{r} = \frac{4-x}{4} \Rightarrow rx = 4-x \Rightarrow 9x = 4 \Rightarrow x = \frac{4}{9}$

$\frac{1}{\sqrt{r}} = \frac{4}{9} \Rightarrow \sqrt{r} = \frac{9}{4}$

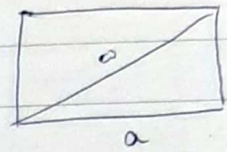
$$\begin{aligned} \text{7} \Rightarrow y - \frac{n}{a} - \frac{a-1}{a} = 0 & \quad \} \Rightarrow m = m' \Rightarrow a = \frac{1}{a} \Rightarrow a^2 = 1 \Rightarrow a = \pm 1 \\ \Rightarrow y - an - 1 = 0 \end{aligned}$$

$$\rightarrow a_{2-1} \rightarrow 1 \mid 5 \cancel{0} \cancel{0} \Rightarrow a_{2-1} 5 \cancel{0} \cancel{0}$$

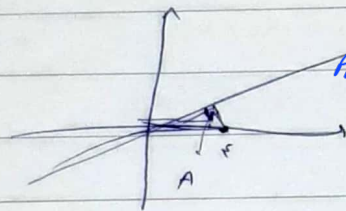
$$\Rightarrow \alpha = \frac{1}{\sqrt{2}} \rightarrow y - x = 0 \rightarrow \text{mod} \rightarrow \frac{|-1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

✓ y = 120

$$\Rightarrow a^2 + \frac{1}{r^2} = p \Rightarrow a^2 = \frac{p}{r^2} \Rightarrow a = \sqrt{\frac{p}{r^2}} = \frac{\sqrt{p}}{r}$$



$$8. \frac{|K-1|}{\sqrt{1+q}} = \frac{0}{\sqrt{1.0}} \Rightarrow \frac{0}{\sqrt{1.0}} \times K \times \frac{1}{K} = \frac{1.0}{\sqrt{1.0}} = \sqrt{1.0}$$



$$AB^V = AH^V + BH^V \rightarrow \kappa^V = \left[\frac{\kappa}{\sqrt{11}} \right]^V + BH^V \rightarrow BH = \frac{9}{11}$$

$$S = \frac{\mu}{\sqrt{1.}} \times \frac{q}{\sqrt{1.}} \times \frac{1}{r} = \frac{\mu V}{r.}$$

9. $\sqrt{r} = \frac{b-a}{-\frac{1}{r} + \frac{1}{p}} \Rightarrow b-a = \frac{\sqrt{r}}{\frac{1}{p} - \frac{1}{r}} \xrightarrow{\text{عزیم}} \sqrt{\left(\frac{1}{p} - \frac{1}{r}\right)^2 + (a-b)^2} = \sqrt{\frac{1}{r^2} + \frac{r}{r^2}} = \frac{r}{r}$

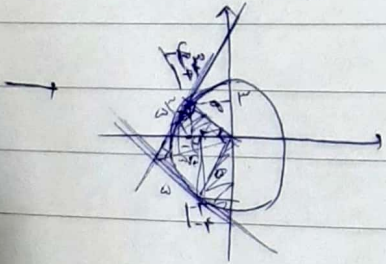
$$\rightarrow \frac{1}{\mu_0} \times \sqrt{\mu} \Rightarrow \frac{\sqrt{\mu}}{\mu_0}$$

10- $\sqrt{9+14} = 5$

$$L \rightarrow ax + by$$

$$aa'z-1 \quad \begin{vmatrix} x' & u' \\ y' & v' \end{vmatrix}$$

$$L' \rightarrow a'n + b' = y$$



$$x^{-1} + y^{-1} = 2\omega$$

$\text{Oxidation} \rightarrow \text{Cinn} \Rightarrow \text{Cinnol} \rightarrow \text{Cinn} \rightarrow \text{Cinnol}$

$$2 \rightarrow pa + bz - f$$

$$aa' - 1 \rightarrow a - \frac{1}{a'}$$

$$\hookrightarrow -a' + b' = p$$

$$y = \frac{r}{a'} + b + r_2 - r \frac{a'}{a} + b' - r$$

$$L': y = \frac{F}{r}u + K$$

$$OA = \omega \quad OL' = \frac{\mu}{\omega} k = \omega \rightarrow k = \frac{\omega \mu}{\mu}$$

$$\frac{V_A}{1\Omega} u = \frac{-1V_Q}{1\Omega} \rightarrow u_B = -V \quad y_B = -1$$

$$- \sqrt{x-1} = V$$