

نام خانوادگی: زهراسادات عینی بهمنماه ۱۵۰۱ سال ۱۳۳۱ هجری شمسی دفتر ۳

ج) $m = \frac{dy}{dx} = \frac{r-r}{s-r} = -1 \rightarrow \begin{vmatrix} 0 \\ -1 \end{vmatrix} \rightarrow -r = -r_0 + \frac{b}{1} \Rightarrow y = -x + 1$

ج) $m = -r \rightarrow m = m' \rightarrow |r| \rightarrow r = -\cancel{1r} + \cancel{1} \Rightarrow y = -rx + 1$

2.) $m = -\frac{1}{r} \rightarrow m' = -\frac{1}{m} = r \Rightarrow \left| \frac{1}{r} \right| \Rightarrow r = \frac{1}{r} + \frac{1}{-1} \Rightarrow y = \frac{1}{m} - 1$

c) $m = \tan \theta = \frac{\sin \theta}{\cos \theta} \Rightarrow \tan 40^\circ = \frac{\frac{\sqrt{r}}{r}}{\frac{1}{r}} = \sqrt{r} \rightarrow \left| \begin{matrix} r \\ r \end{matrix} \rightarrow y - r = \sqrt{r}(n - r) \rightarrow y = \sqrt{r}n - (\sqrt{r} + r) \right.$
 $\angle_r = 40^\circ$

وإذاً $AB = \sqrt{ax^2 + ay^2} \rightarrow AB = \sqrt{(r+1)^2 + (r-1)^2} = \underline{\underline{\omega}}$

$$\therefore d = \frac{|ax+by+c|}{\sqrt{a^2+b^2}} \Rightarrow d = \frac{|4+12-13|}{\sqrt{1^2+1^2}} = \frac{10}{\sqrt{2}} = 5\sqrt{2}$$

$$ax + by + c = 0$$

$$r_x + r_y - r = 0$$

ان) $ax + by = \frac{c + c'}{r} \rightarrow \begin{cases} rx + ry = r \\ rx + ry = r \end{cases} \rightarrow \underline{rx + ry = r}$

$$\rightarrow) \begin{cases} r_m + r_y - r = 0 \\ r_m - r_y - r = 0 \end{cases} \rightarrow d = \frac{|e' - c|}{\sqrt{a^2 + b^2}} \Rightarrow \frac{|1 - r + r|}{\sqrt{r^2 + r^2}} = \frac{r}{\sqrt{1r}}$$

$$r_n - ry - 1 = 0, \quad r_n + ry - 1 = 0$$

$$\frac{|r_x - r_y - 1|}{\sqrt{r^2 + r^2}} = \frac{|r_x + r_y - 1|}{\sqrt{r^2 + r^2}} \rightarrow \begin{cases} r_x - r_y - 1 = r_x + r_y - 1 \rightarrow \underline{x - y = -1} \\ r_x - r_y - 1 = -r_x - r_y + 1 \rightarrow \underline{\omega x + y = 1} \end{cases}$$

$$m = -\frac{1}{2}, m' = 2$$

$$\tan \alpha = \frac{1m - m'}{1 + mm'} = \frac{1r - r'}{1 - rr'} = \frac{\omega}{\omega} = 1 \Rightarrow \alpha = \varepsilon \delta^* \rightarrow \alpha \text{ در } \delta^* \text{ زاویه}$$

الف) $AB = \sqrt{dx^2 + dy^2}$

$AB = \sqrt{(1+d)^2 + (-r-c)^2} = 10$

ب) $m\left(\frac{x_A + x_B}{r}, \frac{y_A + y_B}{r}\right) \Rightarrow m\left(-\frac{d+r}{r}, \frac{c-r}{r}\right) \Rightarrow m \begin{vmatrix} -1 \\ 1 \end{vmatrix}$

الف) $m\left(\frac{x_1 + x_2 + x_3}{r}, \frac{y_1 + y_2 + y_3}{r}\right) = m\left(\frac{-10 - r + r}{r}, \frac{-1r + r + 1}{r}\right) \Rightarrow m \begin{vmatrix} -10 \\ -r \end{vmatrix}$

ب) $S = \frac{1}{r} \left| \begin{pmatrix} -10 & -r & r \\ -1 & 0 & 1 \end{pmatrix} - \begin{pmatrix} -10 & +2r \end{pmatrix} \right| = \frac{9r}{r} = 9$

$\begin{vmatrix} -10 & -r & r \\ -1 & 0 & 1 \end{vmatrix} = \begin{vmatrix} -10 & -r & r \\ -1 & 0 & 1 \end{vmatrix}$

الف) $y' = -y \rightarrow y' = -\frac{rx+1}{rx-r}$

ب) $x' = -x \rightarrow y' = \frac{-rx+1}{-rx-r}$

ج) $y = x \rightarrow x = \frac{ry+1}{ry-r} \rightarrow y = \frac{rx+1}{rx-r}$

د) $y = -x \rightarrow -y = \frac{rx+1}{-rx-r} \rightarrow y = -\frac{rx+1}{rx+r} \rightarrow x = -\frac{ry+1}{ry+r} \rightarrow y = \frac{rx+1}{rx+r}$

الف) $\begin{cases} y' = y + r \rightarrow y = y' - r \\ x' = x - r \rightarrow x = x' + r \end{cases} \rightarrow y' - r = \frac{rx' + 1}{x' - 1} \rightarrow y' = \frac{rx' + 1 + rx' - r}{x' - 1} = \frac{2x' + 1 - r}{x' - 1}$

ب) $\begin{cases} x' = x - r \rightarrow x = x' + r \\ y' = y - r \rightarrow y = y' + r \end{cases} \Rightarrow y' + r = \frac{rx' + 1}{x'} \rightarrow y' = \frac{rx' + 1 - rx'}{x'} = \frac{1}{x'}$

الف) $\begin{cases} 3x + 6y = 12 \\ -3x + 18y = -12 \end{cases} \rightarrow 19y = -1 \rightarrow y = -\frac{1}{19} \rightarrow x = \frac{1}{19}(-\frac{1}{19}) + 1 = \frac{18}{19}$

ب) $x = \frac{12 \cdot 10}{-10 - 12} = \frac{12}{-22} = -\frac{3}{11}$ $y = \frac{12 - 12}{-10 - 12} = \frac{0}{-22} = 0$