

14, 20

سپاسش عرفان زاد یازدهم شهریور ۱۳۹۷

$$m = \frac{dy}{dx} = \frac{-f}{1} = -\varepsilon$$

۱) اف

$$y - 2 = -\varepsilon(x - \varepsilon) \rightarrow y = -\varepsilon x + 1\varepsilon$$

۲)

$$a = -\sqrt{3}$$

ب)

$$y - 2 = -\sqrt{3}(x - \varepsilon) \rightarrow y = -\sqrt{3}x + 1\varepsilon$$

۳-۲

$$a' = -\frac{1}{a} = -\frac{1}{-\sqrt{3}} = \sqrt{3}$$

ب)

$$y - 2 = \sqrt{3}(x - \varepsilon) \rightarrow y = \sqrt{3}x - 1\varepsilon$$

$$a = \tan \alpha = \tan \frac{\pi}{4} = \sqrt{3}$$

د)

$$y - 2 = \sqrt{3}(x - \varepsilon) \rightarrow y = \sqrt{3}x - \varepsilon\sqrt{3} + 2$$

$$d = \sqrt{14 + 9} = 5 = \sqrt{ay^2 + bx^2}$$

۲) اف

$$\frac{4 + 12 - \sqrt{3}}{\sqrt{9 + 14}} = \frac{10}{5} = \sqrt{3} = \frac{|ay + bx + c|}{\sqrt{a^2 + b^2}}$$

ب) ۳)

$$r_n + s_y = 1, \quad r_n + s_y = 2$$

$$r_n + s_y = 1$$

$$\frac{c + c'}{r} = r_n + s_y = \frac{9 + \varepsilon}{2} = 5 \rightarrow r_n + s_y = 5$$

۳) اف

ب) ۴)

$$\frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{9 - \varepsilon}{\sqrt{\varepsilon + 9}} = \frac{9}{\sqrt{10}} = \frac{r\sqrt{10}}{10}$$

$$r_n + s_y = \sqrt{3}$$

$$\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} = \frac{|a'x + b'y + c'|}{\sqrt{a'^2 + b'^2}}$$

۴)

$$r_n - s_y = 1$$

$$\frac{|r_n + s_y - \sqrt{3}|}{\sqrt{1 + 1}} = \frac{|r_n - s_y - 1|}{\sqrt{1 + 1}} \rightarrow |r_n + s_y - \sqrt{3}| = |r_n - s_y - 1|$$

$$① \quad r_n + s_y - \sqrt{3} = r_n - s_y - 1 \rightarrow 2y - x - \sqrt{3} = 0$$

۵)

$$② \quad r_n + s_y - \sqrt{3} = r_n - s_y + 1 \rightarrow 2x + y - \varepsilon = 0$$

dn

$$\tan \alpha = \frac{|m - m'|}{1 + mm'} = \frac{2 + 0}{1 - 4} = \frac{2}{-3} = -\frac{2}{3}$$

$$\rightarrow \alpha = \tan^{-1} \left(-\frac{2}{3} \right)$$

$$d = \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{16 + 49} = 5$$

$$\begin{cases} \frac{x + x'}{2} = -1 \\ \frac{y + y'}{2} = 1 \end{cases}$$

$$\begin{aligned} \text{الف)} \quad \frac{2 - 2 - 1}{2} &= -1 \\ \frac{1 + 0 - 1}{2} &= 0 \end{aligned} \quad \text{ب)} \quad \begin{vmatrix} 2 & 1 \\ -2 & 1 \\ -1 & -1 \end{vmatrix} = 2(1) - 1(-1) = 2 + 1 = 3$$

$$\text{الف)} \quad -y = \frac{2x + 1}{2x - 2} \Rightarrow y = \frac{2x + 1}{2x - 2}$$

$$\text{ب)} \quad y = \frac{-2x + 1}{-2x - 2} = \frac{2x - 1}{2x + 2}$$

$$\text{ج)} \quad x = \frac{2y + 1}{2y - 2} \Rightarrow y = \left(\frac{-2x - 1}{2x - 2} \right) = \frac{2x + 1}{2x - 2} = y$$

$$\text{د)} \quad -y = \frac{-2x + 1}{-2x - 2} \rightarrow y = \frac{2x - 1}{2x + 2}$$

$$\text{الف)} \quad x' = x - 2 \rightarrow x = x' + 2$$

$$y' = y + 2 \rightarrow y = y' - 2$$

$$y' - 2 = \frac{2(x' + 2) + 1}{x' + 2 - 2} \rightarrow y' = \frac{2x' + 5}{x' - 1} + 2 = \frac{2x' + 9}{x' - 1}$$

$$n' = n - r \rightarrow n = n' + r$$

$$y' = y - r \rightarrow y = y' + r$$

$$y' + r = \frac{r(n' + r) + 1}{(n' + r) - 10} \rightarrow y' = \frac{rn' + r^2}{n'} - r \rightarrow y' = \frac{r}{n'}$$

(1, \sqrt{5})

$$10n + 8y = 2$$

د- الف

$$n - 5y = 1 \rightarrow n = 5y + 1$$

$$10n + 8y = 2 \rightarrow 10(5y + 1) + 8y = 2 \rightarrow 19y = -1 \rightarrow y = -1/19$$

$$n = -5/19 + 1 = 14/19$$

(2)

$$x = \frac{\begin{vmatrix} b & c \\ b' & c' \end{vmatrix}}{\begin{vmatrix} a & b \\ a' & b' \end{vmatrix}} = \frac{8+10}{-10+8} = \frac{18}{-2} = -9$$

(3)

$$y = \frac{\begin{vmatrix} a & c \\ a' & c' \end{vmatrix}}{\begin{vmatrix} a & b \\ a' & b' \end{vmatrix}} = \frac{2-2}{-19} = -1/19$$

