

دراسة عادية

(الف-1)

$$m = \frac{y_A - y_B}{x_A - x_B} = \frac{2 - (-1)}{5 - 0} = -\frac{3}{5}$$

$$y - y_A = m(x - x_A) \rightarrow y - 2 = -\frac{3}{5}(x - 5) \rightarrow y = -\frac{3}{5}x + 1\frac{1}{5} \rightarrow$$

$$y = -\frac{3}{5}x + 1\frac{1}{5}$$

$$x y + x y = -1 \rightarrow m = -\frac{y}{x} = -\frac{1}{x}$$

$$y - y_A = m(x - x_A) \rightarrow y - 2 = -\frac{1}{x}(x - 5) \rightarrow y = -\frac{1}{x}x + \frac{5}{x} \rightarrow$$

$$x y = 1 \rightarrow m = -\frac{1}{x} \rightarrow m' = \frac{1}{x^2}$$

$$y - y_A = m(x - x_A) \rightarrow y - 2 = \frac{1}{x}(x - 5) \rightarrow y = \frac{1}{x}x - \frac{5}{x} \rightarrow$$

$$\tan \theta = m \rightarrow m = \tan \frac{\pi}{4} = 1$$

$$y - y_A = m(x - x_A) \rightarrow y - 2 = 1(x - 5) \rightarrow y = x - 3$$

$$d = \sqrt{(x_A - x_B)^2 + (y_A - y_B)^2} = \sqrt{(1 - (-1))^2 + (2 - (-1))^2} = \sqrt{4 + 9} = \sqrt{13} = 3.6$$

$$d = \frac{|ax_A + by_A + c|}{\sqrt{a^2 + b^2}} = d = \frac{|2x + 6y + 1|}{\sqrt{2^2 + 6^2}} = \frac{12}{8} = 1.5$$

$$x + y = 2 \rightarrow x + y = 1 \rightarrow x + y = \frac{1+1}{2} = 1$$

$$x + y = 2 \rightarrow x + y - 2 = 0$$

$$d = \frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{|1 - 1|}{\sqrt{1^2 + 1^2}} = \frac{0}{\sqrt{2}} = 0$$

$$d_1: x + y = r \rightarrow m = -\frac{r}{r}$$

$$d_2: x - y = 1 \rightarrow m = \frac{y}{x} \quad \left. \begin{array}{l} \\ \end{array} \right\} \text{مماسين جي پيداوار} \\ -\frac{r}{r} \times \frac{y}{x} = -1$$

$$\tan \alpha = \frac{|m - m'|}{1 + mm'} = \tan \alpha = \frac{|r - (-r)|}{1 - r} = 1$$

$$d = y = rx + d \rightarrow m = r$$

$$\alpha = 45^\circ$$

$$d' = y = -rx + r \rightarrow m = -r$$

$$\beta = 135^\circ$$

$$d = \sqrt{(x_A - x_B)^2 + (y_A - y_B)^2} = \sqrt{(r - (-r))^2 + (1 - (-1))^2} = \sqrt{16}$$

$$M \left\{ \begin{array}{l} \frac{x_A + x_B}{r} = -1 \\ \frac{y_A + y_B}{r} = 1 \end{array} \right. \quad \text{يا } M(-1, 1)$$

$$C \left\{ \begin{array}{l} \frac{x_A + x_B + x_C}{r} = \frac{-1 + r + r}{r} = \frac{-9}{r} = -r \\ \frac{y_A + y_B + y_C}{r} = \frac{-1 + r + 1}{r} = \frac{-9}{r} = -r \end{array} \right. \quad C(-r, -r)$$

$$\begin{bmatrix} -1 & -r & r \\ -1r & r & 1 \\ 1 & 1 & 1 \end{bmatrix} = \begin{vmatrix} -1 & -r & r \\ -1r & r & 1 \\ 1 & 1 & 1 \end{vmatrix} = -1 - r - r^2 - r^2 - r + 1 = -2r^2 \\ -2r^2 \div r = -r$$

$$\begin{cases} 7x + 4y = 7 \\ (x - 8y = 1) \end{cases} \xrightarrow{(-4) \times} \begin{cases} 7x + 4y = 7 \\ -x + 8y = -4 \end{cases} \rightarrow 19y = -1$$

$$x + \frac{8}{19} = 1 \rightarrow x = \frac{11}{19}$$

$$y = \frac{-1}{19}$$

$$7x + 4y = 7$$

$$x - 8y = 1$$

$$x = -\frac{11}{-19} \rightarrow y = \frac{1}{-19}$$

$$x = \frac{11}{19}$$

$$-y = \frac{r_{n+1}}{t_{n+1}}$$

(الف) (ب)

$$y = \frac{-r_{n+1}}{-t_{n+1}}$$

(ج)

$$n = \frac{ry+1}{ty-r} = tyx-rx = ry+1$$

(د)

$$(t_{n+1}-r)y = r_{n+1} = y = \frac{r_{n+1}}{t_{n+1}}$$

$$-n = \frac{-ry+1}{-ty-r}$$

$$n = \frac{-ry+1}{ty+r} \rightarrow tny+rn = -ry+1$$

(هـ)

$$y = \frac{-r_{n+1}}{t_{n+1}}$$

$$y' = y+r$$

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

(الف) (ب)

$$y = y-r$$

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

$$y' = \frac{rn'+1+rn'-r}{n'-1} = \frac{2n'+1}{n'-1}$$

$$y' = y-r$$

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

(ج)

$$y = y+r$$

$$y'+r = \frac{r(n'+r)+1}{(n'+r)+r} = \frac{rn'+1}{n'}$$

$$y' = \frac{rn'+1-rn'}{n'} = \frac{1}{n'}$$