

$$B \begin{vmatrix} -a \\ \varepsilon \end{vmatrix} \quad A \begin{vmatrix} r \\ -r \end{vmatrix}$$

(C)

$$\begin{vmatrix} \frac{r-a}{r} \\ -\frac{r+\varepsilon}{r} \end{vmatrix} = \begin{vmatrix} -1 \\ 1 \end{vmatrix}$$

$$\Delta = \sqrt{(r+a)^2 + (-r-\varepsilon)^2} \\ = \sqrt{9\varepsilon + 4\varepsilon} = 10\varepsilon$$

$$I^w = \begin{vmatrix} -r \\ w \end{vmatrix} \cdot \begin{vmatrix} -1 \\ -1 \end{vmatrix}$$

(C)

$$S = \frac{1}{r} \begin{vmatrix} w & 1 & 1 \\ -r & r & 1 \\ -1 & -1 & 1 \end{vmatrix} = 9 - 10 + 2\varepsilon + 10 + 3\varepsilon + 2 \cdot 9\varepsilon$$

(3A) $\div r$

$S = 3A$

$$\begin{vmatrix} \frac{w-r-1}{r} \\ \frac{1+r-1}{r} \end{vmatrix} = \begin{vmatrix} -r & \text{الف} \\ -r & -g \end{vmatrix}$$

$$y = \frac{rx+1}{\varepsilon x - w}$$

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

$$\begin{cases} -y = \frac{rx+1}{\varepsilon x - r} \\ y = -\frac{rx+1}{\varepsilon x - r} \end{cases} \quad \text{(الف)}$$

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

$$\begin{cases} y = \frac{-rx+1}{-\varepsilon x + r} \end{cases} \quad \text{(ب)}$$

$$\begin{aligned} x' = x - a &\rightarrow x = x' + a \rightarrow x = x' + r \\ y = y' - b &\rightarrow y = y' + b \rightarrow y = y' - w \\ \rightarrow y' - w &= \frac{r(x' + r) + 1}{(\varepsilon(x' + r) - w)} \rightarrow y' = \frac{\Delta x' + r}{x' - 1} \end{aligned}$$

$$\begin{aligned} \text{(ج)} \quad x' = x - r &\rightarrow x = x' + r \\ y' = y + r &\rightarrow y = y' - r \end{aligned} \quad \text{(الف)}$$

$$\begin{aligned} \rightarrow (y' - r) &= \frac{r(x' + r) + 1}{(\varepsilon(x' + r) - w)} \\ \Rightarrow y' &= \frac{\varepsilon x' - 1}{x' - r} \end{aligned} \quad \text{(ب)}$$

$$\begin{aligned} rx + ry &= r \\ x - wy &= 1 \end{aligned}$$

$$x = - \frac{\begin{vmatrix} r & r \\ -1 & -w \end{vmatrix}}{\begin{vmatrix} r & r \\ 1 & -w \end{vmatrix}} = - \frac{r - (-10)}{-10 - (-\varepsilon)} = - \frac{1\varepsilon}{-19} = \frac{1\varepsilon}{19}$$

$$y = \frac{\begin{vmatrix} r & r \\ 1 & 1 \end{vmatrix}}{\begin{vmatrix} r & r \\ 1 & -w \end{vmatrix}} = \frac{r - r}{19} = \frac{1}{-19} = - \frac{1}{19}$$

$$\begin{cases} rx + \varepsilon y = r \\ x - wy = 1 \end{cases} \rightarrow \begin{aligned} rx - 10y &= r \\ rx + \varepsilon y &= r \end{aligned}$$

$$\begin{aligned} -19y &= 1 \rightarrow y = -\frac{1}{19} \\ x &= \frac{1\varepsilon}{19} \end{aligned}$$

استاذنا المحترم

مكتبة

الجامعة العراقية

$$\left| \frac{2}{\sqrt{2}} \right| \quad \frac{2}{\sqrt{2}} \text{ حيث } \frac{2}{\sqrt{2}} = \frac{2}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$$

$$y - 2 = \sqrt{2}(x - 2)$$

$$y = \sqrt{2}x - 2\sqrt{2} + 2$$

$$x + 3y = 1 \quad (ج)$$

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

$$y - 2 = -\frac{1}{3}(x - 2)$$

$$y = -\frac{1}{3}x + \frac{2}{3} + 2$$

$$y = -\frac{1}{3}x + \frac{8}{3}$$

$$2y + 3x = 1 \quad (د)$$

$$y = -\frac{2}{3}x + \frac{1}{3}$$

$$y - 2 = -\frac{2}{3}(x - 2)$$

$$y = -\frac{2}{3}x + \frac{2}{3} + 2$$

$$y = -\frac{2}{3}x + \frac{8}{3}$$

$$\left| \frac{5}{-2} \right| \quad (الف)$$

$$a = \frac{-2 - 2}{5 - 2} = -\frac{4}{3}$$

$$y + 2 = -\frac{4}{3}(x - 2)$$

$$y = -\frac{4}{3}x + \frac{8}{3} - 2$$

$$y = -\frac{4}{3}x + \frac{2}{3}$$

$$\left| \frac{2}{3} \right|$$

$$3x + 4y = 3 \quad (ب)$$

$$a = \frac{|4 + 12 - 3|}{\sqrt{9 + 16}} = \frac{13}{5} = 2.6$$

$$\left| \frac{-1}{\sqrt{2}} \right| \quad (الف)$$

$$a = \frac{|(-1 - 2)|}{\sqrt{(-1)^2 + (-2)^2}} = \frac{3}{\sqrt{5}} = \frac{3\sqrt{5}}{5}$$

$$2x + 3y = 4, \quad 3x + 4y = 11$$

$$3x + 4y = 11$$

$$\frac{|c - c'|}{\sqrt{a'^2 + b'^2}} = \frac{|11 - 4|}{\sqrt{9 + 16}} = \frac{7}{5} = \frac{7}{5}$$

$$(ب)$$

$$2x + 3y = 4 \quad (الف)$$

$$3x + 4y = 11$$

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$$\Rightarrow 3x + 4y = \frac{11}{5}$$

$$\Rightarrow |3x + 4y| = \frac{11}{5}$$

$$2x - 3y = 1, \quad 2x + 3y = 3$$

$$(د)$$

$$\frac{|2x - 3y - 1|}{\sqrt{4 + 9}} = \frac{|2x + 3y - 3|}{\sqrt{4 + 9}} \Rightarrow |2x - 3y - 1| = |2x + 3y - 3|$$

$$2x - 3y - 1 = 2x + 3y - 3 \Rightarrow -6y = -2 \Rightarrow y = \frac{1}{3}$$

$$2x - 3y - 1 = -2x - 3y + 3 \Rightarrow 4x = 4 \Rightarrow x = 1$$

$$y - 2x = a$$

$$a = 2$$

$$y = 2x = 3$$

$$a = -3$$

$$\tan \alpha = \left| \frac{y - (-2)}{1 + (-2)(2)} \right| = \left| \frac{3}{-3} \right| = 1$$

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