

DATE:

SUB:

Laplace

المعادلات

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$$m = \frac{r-p}{a-r} = -r$$

$$y+rs = r(n-a) \rightarrow y = -rn + 11$$

(الف - 1)

$$ry + rs = 1 \rightarrow m = \frac{-r}{r} = -1$$

$$y-rs = r(n-r) \rightarrow y = rn + 1r$$

(ب)

$$u+vy = 1 \rightarrow m = \frac{-1}{v} \rightarrow m = -\frac{1}{v}$$

$$y-rs = r(n-r) \rightarrow y = rn - 1$$

(ج)

$$\tan \frac{\pi}{4} = \sqrt{r} \rightarrow y-rs = \sqrt{r}(n-r) \rightarrow y = \sqrt{r}n - r\sqrt{r} + r$$

(د)

$$d = \sqrt{(r+1)^2 + (r-1)^2} = \sqrt{9+16} = 5$$

(الف - ٢)

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$$rn + ry = rs \quad d = \frac{|r+1r-r|}{\sqrt{9+16}} = \frac{0}{5} = 0$$

(ب)

$$\begin{cases} rn + ry = r \\ rn + ry = r \end{cases} \xrightarrow{\frac{r}{r}} \boxed{rn + ry = 1}$$

(الف - ٣)

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$$rn + ry = r$$

$$rn + ry = r$$

$$d = \frac{|-r+r|}{\sqrt{r+9}} = \frac{r\sqrt{r}}{1r}$$

(ج)

$$\frac{|rn + ry - r|}{\sqrt{1r}} = \frac{|rn - ry - 1|}{\sqrt{1r}} \rightarrow rn + ry - r = rn - ry - 1$$

$$dy - n - r = 0$$

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$$rn + ry - r = rn + ry + 1$$

$$y + rn - r = 0$$

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$$\tan \alpha = \frac{-r-r}{1-9} \quad m = -r \quad m \leq r$$

$$\tan \alpha = \frac{p}{+a} = +1 \Rightarrow \alpha = 45^\circ$$

$$AB = \sqrt{(r+a)^2 + (-r-9)^2} = \sqrt{9r+109} \approx 10$$

(الف - 9)

(5)

$$M \begin{vmatrix} \frac{p-a}{r} = -1 \\ \frac{9-r}{r} = 1 \end{vmatrix} \rightarrow M \begin{vmatrix} -1 \\ 1 \end{vmatrix}$$

(ب)

(الف - 7)

(5)

$$M \begin{vmatrix} \frac{-10-r+r}{r} = -r \\ \frac{-1r+r+1}{r} = -r \end{vmatrix} \rightarrow M \begin{vmatrix} -r \\ -r \end{vmatrix}$$

$$S = \frac{1}{r} \begin{vmatrix} -10 & -1r & 1 \\ -r & r & 1 \\ r & 1 & 1 \end{vmatrix} \rightarrow S = \frac{1}{r} (-r \cdot -r \cdot 9 - r \cdot 9 - r^2 + 10) \Rightarrow S = 41$$

-1

$$y = \frac{+r_{n+1}}{-r_n + r} \leftarrow -y = \frac{r_{n+1}}{r_n + r}$$

(الف)

(5)

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

(ب)

$$\text{لأن } \log y, m = \frac{ry+1}{ry-r} \rightarrow y = \frac{+r_{n+1}}{r_n + r}$$

(ج)

$$\text{لأن } \log y, n \rightarrow -n = \frac{-ry+1}{-ry-r} \rightarrow n = \frac{-ry+1}{ry+r} \rightarrow y = \frac{-r_{n+1}}{r_n + r}$$

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$$\begin{aligned} n' &= n - r \\ y &= y + r \end{aligned} \rightarrow \begin{aligned} n' + r &= n \\ y' - r &= y \end{aligned} \Rightarrow y' - r = \frac{n' + r}{n' - 1} \rightarrow y' = \frac{n' + r}{n' - 1} \quad (\text{الف 9})$$

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

$$\begin{aligned} n' &= n - r & n &= n' + r \\ y' &= y - r & y &= y' + r \end{aligned} \quad y' + r = \frac{r n' + r}{n'} \rightarrow y' = \frac{r}{n'} \rightarrow y = \frac{r}{n}$$

$$\begin{cases} rn + ry = r \\ n - \omega y = 1 \end{cases} \xrightarrow{x=r} \begin{cases} rn + ry = r \\ -rn + \omega y = -r \end{cases} \quad (\text{الف 10})$$

$$19y = -1 \rightarrow y = -\frac{1}{19}, \quad n = \frac{16}{19} \quad (\text{5})$$

$$\begin{cases} rn + ry = r \\ n - \omega y = 1 \end{cases} \quad n = -\frac{r+1}{-10-r} \quad y = \frac{r-r}{-10-r} = -\frac{1}{19}$$

$$\downarrow$$

$$n = \frac{16}{19}$$