

بازرسی

۱۹, ۲۰

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{r}{-1} = -r$$

$$(y = -rx + 1) \checkmark$$

$$\left| \frac{\omega}{-r} \right| = \left| \frac{1}{-r} \right|$$

$$y = -rx - \frac{1}{r}$$

مم' =

$$(y = rx + 1/r) \checkmark$$

$$ry + y_1 = -1$$

$$y = -rx + r$$

$$ry + y_1 = 1/r$$

$$ry = -ar + 1$$

$$y = -\frac{1}{r} ar + \frac{1}{r}$$

$$(y = rx - 1) \checkmark$$

$$rx, y = 1$$

$$mm' = -1$$

$$m = \tan \frac{\pi}{4} \Rightarrow m = \sqrt{r}$$

$$(y = \sqrt{r}x + 1 - \sqrt{r}) \checkmark$$

$$\frac{\pi}{4} = \frac{\pi}{4}; -r$$

$$\sqrt{r^2 + (-r)^2} = (r) \checkmark$$

$$\left| \frac{r}{-r} \right| = \left| \frac{r-1}{r-r} \right|$$

$$\left| \frac{1}{\sqrt{r^2 + (-r)^2}} \right| = \left| \frac{1}{\sqrt{2r^2}} \right|$$

$$d = \frac{|r(r) + (-r)(r) - r|}{\sqrt{r^2 + r^2}} = \frac{|y + r - r|}{\omega} = \frac{1}{\omega} = \frac{1}{\sqrt{2r^2}} = \frac{1}{\sqrt{2}r} \checkmark$$

$$r_1, y_1 = r; \text{دوباره}$$

$$rx + y = 1$$

$$rx + y = r$$

$$rx + y = 1/r$$

$$ax + by = \frac{c+c'}{r} \Rightarrow rx + y = \frac{1r+1}{r} \Rightarrow rx + y = 1 \checkmark$$

$$(c) = -r$$

$$d = \frac{|c-c'|}{\sqrt{a^2+b^2}} \Rightarrow \frac{|1r-1|}{\sqrt{r^2+r^2}} = \left(\frac{r}{\sqrt{2r^2}} \right) \cdot \frac{\sqrt{2r^2}}{\sqrt{2r^2}} = \frac{\sqrt{2r^2}}{1/r} = \frac{r\sqrt{2}}{1/r} \checkmark$$

$$rx - ry = 1 \Rightarrow rx - ry - 1 = 0$$

$$rx + ry = r \Rightarrow rx + ry - r = 0$$

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

$$\frac{|rx-ry-1|}{\sqrt{r^2+r^2}} = \frac{|rx+ry-r|}{\sqrt{r^2+r^2}} \Rightarrow |rx-ry-1| = |rx+ry-r|$$

$$x - dy = -r \checkmark$$

$$\omega x + y = r \checkmark$$

$$\begin{cases} x - dy = -r \\ \omega x + y = r \end{cases}$$

$$\begin{cases} rx - ry - 1 = rx + ry - r \Rightarrow x - dy = -r \\ rx - ry - 1 = -rx - ry + r \Rightarrow dx + y = r \end{cases}$$

$$y + rx = r$$

$$y - rx = d$$

$$y = -rx + r$$

$$y = rx + d$$

$$m = -r$$

$$m = r$$

$$\tan \alpha = \left| \frac{m-m'}{1+mm'} \right| \Rightarrow$$

$$\left| \frac{r-(-r)}{1-r(-r)} \right| \Rightarrow \tan \alpha = 1 \Rightarrow \alpha = \frac{\pi}{4} = 45^\circ \checkmark$$

$$B = \begin{pmatrix} -\omega \\ r \end{pmatrix} \quad A = \begin{pmatrix} r \\ -r \end{pmatrix}$$

$$d = \sqrt{(y_1 - y_1)^2 + (x_1 - x_1)^2} \Rightarrow d = \sqrt{\left(\frac{r - (-r)}{r}\right)^2 + \left(\frac{r - (-r)}{r}\right)^2} = 1 \quad \checkmark$$

(الف) -4
(2)

$$M = \left(\frac{x_1 + x_2}{r}, \frac{y_1 + y_2}{r} \right) \Rightarrow M = \left(\frac{r - d}{r}, \frac{r - r}{r} \right)$$

$$M = (1, 1) \quad \begin{pmatrix} -1 \\ 1 \end{pmatrix} \quad \checkmark$$

$$\begin{pmatrix} -1 \\ -1 \end{pmatrix} \quad \begin{pmatrix} -r \\ r \end{pmatrix} \quad \begin{pmatrix} r \\ -r \end{pmatrix}$$

$$X_G = \frac{x_1 + x_2 + x_3}{r} \Rightarrow \frac{-1 - r + r}{r} = \frac{-1}{r} = -r$$

$$Y_G = \frac{y_1 + y_2 + y_3}{r} \Rightarrow \frac{-1 + r + 1}{r} = \frac{r}{r} = 1$$

(2) -v
(الف) $\begin{pmatrix} -r \\ -r \end{pmatrix}$

$$\frac{1}{r} \begin{vmatrix} r & 1 & 1 \\ -r & r & 1 \\ -1 & -1 & 1 \end{vmatrix} \Rightarrow \frac{1}{r} (9 + -1 + r^2 - (-r) - (-r) - (-r^2))$$

$$\frac{1}{r} (9 + r^2 + r - r + r^2 - 1) = (r) \quad \checkmark$$

$$y = \frac{r(x+1)}{r(x-r)}$$

$$y = \frac{1-rx}{r(x+r)} \quad \checkmark$$

$$y = \frac{r(x+1)}{r-rx} \quad \checkmark \Leftrightarrow -y = \frac{r(x+1)}{r(x-r)}$$

(الف) -1

$$y = -\frac{r(x+1)}{r(x-r)} \Rightarrow y = \frac{r(x-1)}{-r(x-r)}$$

$$y = \frac{1-rx}{-r(x-r)} \quad \checkmark \Leftrightarrow y = \frac{r(x+1)}{r(x-r)}$$

(2) (-)

$$-x = \frac{1-rx}{-r(x-r)} \Rightarrow x = \frac{r(x-1)}{-r(x-r)}$$

↑

$$y = \frac{r(x+1)}{r(x-r)} \quad \checkmark$$

$$\Leftrightarrow y = -\frac{r(x-1)}{r(x-r)} \Leftrightarrow x = \frac{r(x+1)}{r(x-r)}$$

(ج)

$$-x = \frac{r(x+1)}{r(x-r)}$$

$$\Leftrightarrow y = \frac{r(x+1)}{r(x-r)} \quad \checkmark \Leftrightarrow y = \frac{r(x+1)}{r(x-r)} \quad \checkmark$$

(ب)

$$y = \frac{r(x+1)}{x-r}$$

$$y' - r = \frac{r(x'+r)+1}{(x'+r)-r}$$

$$\begin{cases} x' = x-r \\ y' = y+r \end{cases} \Rightarrow \begin{cases} x = x'+r \\ y = y'-r \end{cases} \quad \begin{vmatrix} r \\ -r \end{vmatrix} \quad (2) \quad 9$$

(الف)

$$y' = \frac{r(x'+r)+1}{x'-1} + \frac{r'-r}{x'-1} \Rightarrow y' = \frac{rx'+r}{x'-1} \Rightarrow y = \frac{rx+r}{x-1} \quad \checkmark$$

$$y' + r = \frac{r(x'+r)+1}{(x'+r)-r} \Rightarrow y' = \frac{rx'+r}{x'} \Rightarrow y' = \frac{r}{x'}$$

$$y = \frac{r}{x} \quad \checkmark$$

$$\begin{cases} x' = x-r \\ y' = y-r \end{cases} \Rightarrow \begin{cases} x = x'+r \\ y = y'+r \end{cases} \quad \begin{vmatrix} r \\ r \end{vmatrix} \quad (-)$$

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

$$\begin{cases} rx + ry = r \\ x - \omega y = 1 \end{cases}$$

$$\begin{cases} rx + ry = r \\ rx - 12y = r \end{cases}$$

$$\begin{cases} rx + ry = r \\ x - \omega y = 1 \end{cases}$$

$$x = \frac{1r}{19} \quad \checkmark \quad 19y = -1 \Rightarrow y = -\frac{1}{19} \quad \checkmark$$

$$y = \frac{\begin{vmatrix} r & r \\ 1 & -1 \end{vmatrix}}{\begin{vmatrix} r & r \\ 1 & -1 \end{vmatrix}} = -\frac{1}{19} \quad \checkmark \quad y = \frac{1}{-19} \Rightarrow y = -\frac{1}{19} \quad \checkmark$$