

(۱) زاویه α را بیابید

$\tan \alpha = \frac{y}{x} = \frac{\sqrt{3}}{1} = \sqrt{3}$

$\tan 60^\circ = \sqrt{3}$

$\alpha = 60^\circ$

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

معادله خط $2y + 4x = -1$

$2y = -4x - 1$

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

$y = -2x + 1$

معادله خط $3y = -x + 1$

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

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

معادله خط $2y + 4x = -1$

$2y = -4x - 1$

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

$y = -2x + 1$

$y = -2x + 1$

(۲) $\sqrt{(2-(-1))^2 + (3-(-1))^2} = \sqrt{9+16} = 5$

$3x + 4y - 1 = 0$

$3x + 4y = 1$

$3x + 4y - 1 = 0$

$3x + 4y = 1$

$3x + 4y = 1$

معادله خط $2x + 4y - 4 = 0$

$2x + 4y = 4$

$x + 2y = 2$

$x = 2 - 2y$

$x = 2 - 2y$

$x = 2 - 2y$

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

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

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

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

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

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

$\tan \alpha = \left| \frac{m - m'}{1 + mm'} \right| = \left| \frac{1 + 3}{1 + (-3)} \right| = 1$

$\tan \alpha = 1$

$\alpha = 45^\circ$

$y + 3x = 3$

$y = -3x + 3$

$y = -3x + 3$

$y = -3x + 3$

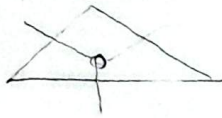
$$A = \begin{bmatrix} 2 \\ -1 \end{bmatrix}$$

$$B = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$$

$$\sqrt{(x-1)^2 + (y-2)^2} = 1$$

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

معادلات خط مماس و خط عمود



$$\frac{2-1-1}{1} = -1$$

$$\frac{1+2-2}{1} = 1$$

معادلات خط مماس و خط عمود

$$A = \begin{bmatrix} 2 \\ -1 \end{bmatrix}$$

$$B = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$$

$$C = \begin{bmatrix} -1 \\ 1 \end{bmatrix}$$

$$\begin{cases} x' = -y \\ y' = -x \end{cases}$$

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

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

معادلات خط مماس و خط عمود

$$\begin{cases} x' = y \\ y' = x \end{cases}$$

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

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

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

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

$$\frac{2x'+1}{2x'-1} = \frac{2x'+1}{2x'-1}$$

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

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

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

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

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

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

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

$$x' = x-1 \Rightarrow x = x'+1$$

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

$$y' = y-1 \Rightarrow y = y'+1$$

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

$$\begin{cases} 2x+5y=2 \\ x-2y=1 \end{cases}$$

$$\begin{cases} 2x+5y=2 \\ -2x+10y=-2 \end{cases}$$

$$x = -\frac{5+1}{-10-5} = \frac{16}{15}$$

$$y = \frac{2-2}{-10-5} = -\frac{1}{15}$$

$$4y = -1 \Rightarrow y = -\frac{1}{4}$$

$$x = 2(-\frac{1}{4}) + 1 = \frac{1}{2}$$

$$x = \frac{1}{2} = \frac{8}{16}$$