

TUE 22 NOV

٢٧ ربيع الثاني

سه شنبه

٢٠

المعادلة المستقيمة

$$m = \frac{\Delta y}{\Delta x} = -2$$

$$y = ax + b \rightarrow y = -2x + b \rightarrow 2 = -2(2) + b \rightarrow b = 18 \quad (\text{الف})$$

$$y = -2x + 18$$

$$m = -\frac{4}{2} = -2$$

(ب) هم أيضا

$$y = ax + b \rightarrow y = -2x + b \rightarrow 2 = -2(4) + b \rightarrow b = 10$$

$$y = -2x + 10$$

$$mx - \frac{1}{x} = -1 \rightarrow m = 2$$

$$\frac{1}{x} = \frac{0}{x} \quad (\text{ج})$$

$$y = ax + b \rightarrow y = 2x + b$$

$$2 = 2(4) + b \rightarrow b = -10$$

$$y = 2x - 10$$

$$\tan \frac{\pi}{4} = \sqrt{2}$$

$$y = ax + b \rightarrow y = \sqrt{2}x + b \rightarrow 2 = \sqrt{2} + b \rightarrow b = 2 - \sqrt{2}$$

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

٣٠ ربيع الثاني

FRI 25 NOV

جمعه

$$AB = \sqrt{\Delta x^2 + \Delta y^2} \Rightarrow \sqrt{(r+1)^2 + (r-1)^2} = \sqrt{4r} \quad (2) \quad (نقطة)$$

$$d = \frac{|ax+by+c|}{\sqrt{a^2+b^2}} = \frac{|r(r)+r(r)-r|}{\sqrt{r^2+r^2}} = (r) \quad (1)$$

$$\frac{ax+by+c+c'}{1} \rightarrow \frac{rx+ry+1-r-1}{1} = \dots \quad (3) \quad (نقطة)$$

$$\boxed{rx+ry-1=0}$$

$$\begin{cases} rx+ry-1=0 \\ rx+ry-1=0 \end{cases} \rightarrow \begin{cases} rx+ry-1=0 \\ rx+ry-1=0 \end{cases}$$

$$d = \frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|1-r-1|}{\sqrt{r^2+r^2}} = \frac{r}{r\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} \quad (4)$$

$$\frac{|ax+by-c|}{\sqrt{a^2+b^2}} = \frac{|a'x+b'y-c'|}{\sqrt{a'^2+b'^2}} \rightarrow \frac{|rx-ry-1|}{\sqrt{r^2+(-1)^2}} = (5)$$

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

$$rx-ry-1 = rx+ry-r \rightarrow x-2y = -r \rightarrow \boxed{x-2y+r=0}$$

$$rx-ry-1 = -rx-ry+r \rightarrow 2x+y = r \rightarrow \boxed{2x+y-r=0}$$

۱ جمادی الاول

SAT 26 NOV

$$y + rx - r = 0$$

$$y - rx - d = 0$$

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

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

$$\tan \alpha = \left| \frac{m - m'}{1 + mm'} \right| = \left| \frac{-r - r}{1 - r^2} \right| = \left| \frac{-d}{d} \right| = 1$$

$$\tan \alpha = 1$$

$$\alpha = \frac{\pi}{4} = 45^\circ$$

$$AB = \sqrt{(r+d)^2 + (-r-r)^2} = \sqrt{r^2 + r^2} = \sqrt{2}r = 10$$

$$M \left| \begin{array}{c} x_A + x_B \\ r \end{array} \right| \rightarrow \left| \begin{array}{c} r - d = -1 \\ -r + d = 1 \end{array} \right|$$

$$(-1, 1)$$

$$G \left| \begin{array}{c} x_1 + x_2 + x_3 \\ r \end{array} \right| \rightarrow G \left| \begin{array}{c} r - r - 1 \\ 1 + r - 1 \end{array} \right|$$

$$(-r, -r)$$

$$S = \frac{1}{r} \left| \begin{array}{ccc} -1 & -r & r \\ -1 & r & 1 \\ 1 & 1 & 1 \end{array} \right|$$

$$\frac{1}{r} \left| -r^2 - r^2 - r - (r - 1 + r^2) \right| = \frac{1}{r} |9r| = 9$$

روز بسیج مستضعفان (تشکیل بسیج مستضعفان به فرمان حضرت امام خمینی (رحمت الله علیه) - ۱۳۵۸ ه. ش)

$$y = \frac{-2x+1}{-2x-3} = \frac{2x-1}{2x+3} \quad (\text{نقشه } x) \quad -y = \frac{2x+1}{2x-3} \quad (\text{نقشه } y)$$

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

نقشه ٢

$$x = \frac{-2y+1}{-2y-3} \quad x = \frac{2y+1}{2y-3} \rightarrow y = \frac{-2x-1}{2-2x} \quad (\text{نقشه } y) \quad y = \frac{2x+1}{2x-2}$$

$$\begin{cases} x' = x-2 \\ y' = y+2 \end{cases} \rightarrow \begin{cases} x = x'+2 \\ y = y'-2 \end{cases} \rightarrow y-2 = \frac{2x'+2}{x'-1} \quad (4 \text{ نقشه})$$

$$y' = \frac{2x'+2}{x'-1} + 2 \rightarrow y' = \frac{2x'+2+2x'-2}{x'-1} \rightarrow y' = \frac{4x'}{x'-1}$$

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

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

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

$$= \frac{-12}{-14} = \frac{12}{14}$$

$$\begin{cases} 2x+2y=2 \\ x-2y=1 \end{cases} \rightarrow \begin{cases} 2x+2y=2 \\ -2x+4y=-2 \end{cases} \rightarrow \begin{cases} 2x+2y=2 \\ -2x+4y=-2 \end{cases} \rightarrow \begin{cases} 2x+2y=2 \\ 6y=0 \end{cases} \rightarrow \begin{cases} 2x+2y=2 \\ y=0 \end{cases} \rightarrow \begin{cases} 2x+2(0)=2 \\ y=0 \end{cases} \rightarrow \begin{cases} 2x=2 \\ y=0 \end{cases} \rightarrow \begin{cases} x=1 \\ y=0 \end{cases}$$

$$y = \frac{(4)(1) - (1)(2)}{(4)(-1) - (2)(1)} = \frac{-1}{-14} = \frac{1}{14}$$

$$14y = -1 \rightarrow y = -\frac{1}{14}$$

$$x = \frac{14}{14}$$