

الف) $\begin{vmatrix} 1 & 0 \\ 1 & -1 \end{vmatrix} \rightarrow \frac{0}{-1} = -1 \quad y = -x + 1$

ب) $2y + 4x + 1 = 0 \rightarrow \frac{0}{4} = -1 \quad y = -x + 1$

ج) $x + 3y - 1 = 0 \rightarrow \frac{0}{3} = -\frac{1}{3} \quad y = -\frac{1}{3}x + \frac{1}{3}$

د) $\frac{2}{3} = \frac{1}{3} \rightarrow \text{تقاطع} = \sqrt{10} \quad y = \sqrt{10}x + 10\sqrt{10}$

$r = 4\sqrt{10}$

الف) $A/\frac{1}{\sqrt{2}} \quad B/\frac{-1}{\sqrt{2}} \rightarrow d = \sqrt{a^2x^2 + b^2y^2} \Rightarrow \sqrt{1+1} = \sqrt{2}$

ب) $3x + 4y - 12 = 0 \quad d = \frac{|ax+by+c|}{\sqrt{a^2+b^2}} = \frac{|4+12-12|}{\sqrt{16+9}} \rightarrow \frac{4}{5}$

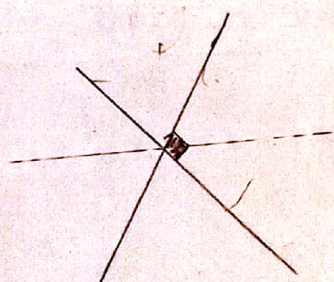
$2x + 3y - 6 = 0 \quad 4x + 6y - 12 = 0$

الف) $4x + 6y - 12 = 0$

فاصله نقطه A از خط $4x + 6y - 12 = 0$

ب) $d = \frac{|4x+6y-12|}{\sqrt{16+36}} = \frac{|12-12|}{\sqrt{52}} \rightarrow \frac{0}{\sqrt{52}}$

$4x + 6y - 12 = 0$



$2x - 3y = 1 \quad 2x + 3y = 12$

$\frac{|ax+by+c|}{\sqrt{a^2+b^2}} = \frac{|a'x+b'y+c'|}{\sqrt{a'^2+b'^2}} \rightarrow \frac{|2x-3y-1|}{\sqrt{4+9}} = \frac{|2x+3y-12|}{\sqrt{4+9}}$

① $2x-3y-1 = 2x+3y-12 \rightarrow 0 = 6y-11 \rightarrow y = \frac{11}{6}$

② $2x-3y-1 = -(2x+3y-12) \rightarrow y+4x-13 = 0$

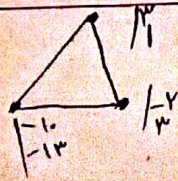
$y + 2x = 12 \quad y - 2x = 12 \quad \tan \alpha = \left| \frac{m-m'}{1+mm'} \right| = \left| \frac{0}{-1} \right| = 1 \quad \alpha = 45^\circ$

$A/\frac{1}{\sqrt{2}} \quad B/\frac{-1}{\sqrt{2}} \quad m/\frac{1}{\sqrt{2}} \quad n/\frac{-1}{\sqrt{2}}$

الف) $d = \sqrt{a^2x^2 + b^2y^2} = 10$

ب) $m/\frac{-1+1}{1} = -1 \quad \frac{1-1}{1} = 0$

$\begin{vmatrix} 1 & 1 & 1 \\ -1 & 1 & 1 \\ 1 & 1 & 1 \end{vmatrix} = 0$



الف) $G/\frac{12-12-1}{1} = -1 \quad \frac{1+12-12}{1} = 0$

ب) $\frac{1}{1} \begin{vmatrix} 1 & 1 & 1 \\ -1 & 1 & 1 \\ 1 & 1 & 1 \end{vmatrix} = 0$

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$$y = \frac{2u+1}{4u-3}$$

الف) فرض کنیم $-y = \frac{2u+1}{4u-3}$: قرینه نسبت به محور ka

ب) $y = \frac{-2u+1}{-4u-3}$: طول قرینه شود

ج) $u \rightarrow y$: قرینه نسبت به ka اول و دوم
 $y \rightarrow u \rightarrow u = \frac{2y+1}{4y-3} \rightarrow y = \frac{-2u-1}{4-4u}$

د) $u \rightarrow -y$
 $y \rightarrow -u \rightarrow -u = \frac{-2y+1}{-4y-3} \rightarrow y = \frac{2u-1}{-4-4u}$

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

$$/0 \rightarrow /2 \quad u \rightarrow u-2 \rightarrow u'+2=u$$

$$\begin{cases} u' = u-2 \rightarrow u' = u-2 \rightarrow u'+2=u \\ y' = y-1 \rightarrow y' = y+1 \rightarrow y'-1=y \end{cases}$$

الف) $y'-1 = \frac{2u'+2}{u'-1} \rightarrow y' = \frac{2u'+2+u'-1}{u'-1}$

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

ب) $/0 \rightarrow /2 \rightarrow$

$$\begin{cases} u' = u-2 \rightarrow u'+2=u \\ y' = y-1 \rightarrow y'+1=y \end{cases}$$

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

$$y' = \frac{2}{u'}$$

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$$\begin{cases} 3u+5y=2 \\ u-5y=1 \end{cases}$$

الف) از روش ضریب

$$\begin{cases} 3u+5y-2=0 \\ -u+5y-1=0 \end{cases} \rightarrow -3u+15y+3=0 \Rightarrow 14y=-1$$

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

$$u = \frac{18}{14}$$

ب) $u = -\frac{8+10}{-10-8} = \frac{18}{18}$

$$y = \frac{2-2}{-8-10} = \frac{-1}{18}$$