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نام و نام خانوادگی هجری شمسی پاسخنامه تشریحی تکلیف شماره کلاس یازدهم ریاضی A

الف) $y = ax + b \rightarrow \begin{vmatrix} 1 \\ 1 \end{vmatrix} \begin{vmatrix} 5 \\ -1 \end{vmatrix} \sim a = -3 \sim y = -3x + 18$
 ب) $y = ax + b \rightarrow ax - y + b = 0 \rightarrow \frac{a}{1} = \frac{-1}{1} \neq \frac{b}{1} \sim a = -3 \rightarrow y = -3x + b$ [f]
 $9x + 2y + 1 = 0 \rightarrow y = -\frac{9}{2}x - \frac{1}{2}$
 ج) $ax - y + b = 0 \rightarrow -\frac{a}{1} = \frac{a}{-1} \xrightarrow{\text{نسبت}} a = 3 \sim y = 3x + b$ [f]
 $x + 2y - 1 = 0 \rightarrow \frac{-a}{-1} = \frac{a}{1} \xrightarrow{\text{نسبت}} a = 3 \sim y = 3x + b$ [f]
 $40 \sim \tan \theta = a = \sqrt{3} \rightarrow y = \sqrt{3}x + b$ [f]
 $\sqrt{3}x + b = 2 \rightarrow y = \sqrt{3}x + 2 - 4\sqrt{3}$

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الف) $\begin{vmatrix} -1 \\ 1 \end{vmatrix} \begin{vmatrix} 1 \\ 1 \end{vmatrix} \sim \sqrt{(1-1)^2 + (-1-1)^2} = \sqrt{2} = \Delta$
 ب) $\begin{vmatrix} 1 \\ 1 \end{vmatrix} \begin{vmatrix} 1 \\ 1 \end{vmatrix} \sim \frac{|4+12-1|}{\sqrt{25}} = \frac{|15|}{5} = 3$

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الف) $\sim 4x + 9y - 18$
 $2x + 3y - 9 = 0 \rightarrow 4x + 6y - 18 = 0 \rightarrow \frac{c+c'}{r} = -1 \rightarrow 4x + 6y - 18 = 0$

ب) $\frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|-18+12|}{\sqrt{16+81}} = \frac{6}{\sqrt{97}} = \frac{\sqrt{36}}{\sqrt{97}} = \frac{\sqrt{36}}{\sqrt{97}}$

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$3x + 4y = 1, 2x + 3y = 3$
 $\frac{|3x - 2y - 1|}{\sqrt{9+4}} = \frac{|2x + 3y - 3|}{\sqrt{4+9}} \rightarrow 3x - 2y - 1 = \pm(2x + 3y - 3)$
 $\rightarrow 3x - 2y - 1 = 2x + 3y - 3 \rightarrow \Delta y = x + 2 \rightarrow y = \frac{x+2}{\Delta}$
 $\rightarrow 3x - 2y - 1 = -2x - 3y + 3 \rightarrow y = -5x + 4$

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$y + 3x = c \rightarrow y = -3x + c$
 $y - 2x = 0 \rightarrow y = 2x + 0$
 $\left| \frac{m-m'}{1+mm'} \right| \rightarrow \left| \frac{-3-2}{1-6} \right| = 1 \sim \tan \theta = 1$

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$$\rightarrow \sqrt{\left(\frac{r+r}{4}\right)^2 + \left(\frac{-a-c}{4}\right)^2} = 1$$

$$\rightarrow y = \frac{r-r}{4} = 1, \quad x = \frac{-a+c}{4} = -1 \rightarrow (-1, 1)$$

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$$\rightarrow \left| \begin{array}{ccc|c} 1 & -r & r & 1 \\ -1 & c & 1 & 1 \end{array} \right|$$

$$\rightarrow \frac{-1 \cdot -r + r}{r} = x = -r, \quad y = \frac{-1c + c + 1}{r} = \frac{1}{r} \rightarrow (-r, \frac{1}{r})$$

$$\rightarrow \frac{1}{r} \left| \begin{array}{ccc|c} -1 & -r & r & 1 \\ -1 & c & 1 & 1 \end{array} \right| = (-9+r+c-r-r-r) \frac{1}{r} = \frac{r-9}{r} = 5$$

$$\frac{1}{r}(94) = r \wedge \left| \begin{array}{ccc|c} r & 1 & 1 & 1 \\ -r & r & 1 & 1 \\ -1 & -1 & 1 & 1 \end{array} \right|$$

1,8

$$\rightarrow y = \frac{rx+1}{rx-c} \rightarrow y = \frac{-rx-1}{rx-c}$$

$$\rightarrow y = \frac{-rx+1}{-rx-c}$$

$$\rightarrow x = \frac{ry+1}{ry-c} \rightarrow ry+1 = rx-y-cx \rightarrow y(r-cx) = -cx-1 \rightarrow y = \frac{-cx-1}{r-cx}$$

$$\rightarrow -x = \frac{-ry+1}{-ry-c} \rightarrow y(rx+c) = -cx+1 \rightarrow y = \frac{-cx+1}{rx+c}$$

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$$x' \rightarrow x+r$$

$$y' \rightarrow y-r \rightarrow y-r = \frac{r(x+r)+1}{x-1} = \frac{rx+r^2+1}{x-1} \rightarrow y = \frac{rx+r^2+c(x-r)-r}{x-1}$$

$$\begin{aligned} x' &= x+c \\ y' &= y+r \end{aligned} \rightarrow y+r = \frac{\frac{rx+r^2}{r(x+r)}+1}{x} = \frac{rx+r}{x} \rightarrow y = \frac{rx+r-rx}{x} = \frac{r}{x}$$

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$$\rightarrow \begin{cases} rx+ky=r \\ x-ay=1 \end{cases} \rightarrow \begin{cases} rx+ky=r \\ -rx+10y=r \end{cases}$$

$$\rightarrow x = \frac{\begin{vmatrix} r & r \\ -a & 1 \end{vmatrix}}{\begin{vmatrix} r & k \\ 1 & -a \end{vmatrix}} = \frac{r+1}{-1a-r} = \frac{rk}{1a}$$

$$y = \frac{\begin{vmatrix} r & r \\ r & k \end{vmatrix}}{\begin{vmatrix} r & k \\ 1 & -a \end{vmatrix}} = \frac{r-r}{-1a} = \frac{-1}{1a}$$

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