

۱۹,۲۵

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره کلاس

الف) $m = \frac{dy}{dx} \Rightarrow \frac{y-(-1)}{x-\omega} \Rightarrow \frac{x}{-1} \Rightarrow -x \Rightarrow -(x+b=y) \Rightarrow x \leq \epsilon \Rightarrow -14+b \leq 2 \Rightarrow b \leq 17 \Rightarrow -\epsilon + 17 \leq y$ ✓

۲

ب) $y_1 + y_2 + 1 = 0 \parallel y_1 + y_2 + C = 0 \Rightarrow x = \epsilon \Rightarrow y = 2 \Rightarrow y + \epsilon + C = 0 \Rightarrow C = -2 \Rightarrow y_1 + y_2 + 1 = 0$ ✓

۲

ج) $x + y = 1 \Rightarrow y = 1 - x \Rightarrow y = \frac{1-x}{1} \Rightarrow y = \frac{1}{1} - \frac{x}{1} \Rightarrow y = 1 - x \Rightarrow x + b = y \Rightarrow x = \epsilon \Rightarrow 1 + b \leq y \Rightarrow b \leq -10 \Rightarrow y_1 - 10 \leq y$ ✓

۱

د) $\sqrt{a^2 + b^2} = \sqrt{10} \Rightarrow \sqrt{10 + b^2} \Rightarrow x = \epsilon \Rightarrow \sqrt{10 + b^2} = 2 \Rightarrow b \leq 2 - \sqrt{10} \Rightarrow \sqrt{10} + 2 - \sqrt{10} = y$ ✓

۱

الف) $\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \Rightarrow A/P \text{ و } B/U \Rightarrow \sqrt{(x-(-1))^2 + (y-1)^2} \Rightarrow \sqrt{9 + 16} \Rightarrow \omega$ ✓

۲

ب) $\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} \Rightarrow \frac{|y(1) + x(1) - 3|}{\sqrt{1 + 1}} \Rightarrow \frac{10}{2} = 5$ ✓

۲

الف) $\begin{cases} ax + by = c \\ ax + by = c' \end{cases} \Rightarrow ax + by = \frac{c+c'}{2} \Rightarrow \begin{cases} \epsilon x + 4y = 17 \\ \epsilon x + 4y = 19 \end{cases} \Rightarrow \epsilon x + 4y = 18 \Rightarrow \epsilon x + 4y - 18 = 0$ ✓

۲

ب) $\frac{|c-c'|}{\sqrt{a^2 + b^2}} \Rightarrow \frac{|-17 - (-17)|}{\sqrt{1 + 16}} \Rightarrow \frac{0}{\sqrt{17}} \Rightarrow \frac{1}{\sqrt{17}} \Rightarrow \frac{17}{17}$ ✓

۳

$\frac{|ax + by - c|}{\sqrt{a^2 + b^2}} = \frac{|a'x + b'y - c'|}{\sqrt{a'^2 + b'^2}} \Rightarrow \frac{|17x - 2y - 1|}{\sqrt{1 + 4}} = \frac{|17x + 2y - 1|}{\sqrt{1 + 4}}$

۲

$\Rightarrow 17x - 2y - 1 = 17x + 2y - 1 \Rightarrow 4y = 0 \Rightarrow y = 0$ ✓

۴

$17x - 2y - 1 = -17x - 2y + 1 \Rightarrow 34x - 4 = 0 \Rightarrow x = \frac{1}{8.5}$ ✓

۴

$17x - 2y = 1 \text{ و } 17x + 2y = 1 \Rightarrow \tan \alpha = \left| \frac{m - m'}{1 + mm'} \right| \Rightarrow \left| \frac{-17 - 2}{1 + (-4)} \right| \Rightarrow \left| \frac{-19}{-3} \right| \Rightarrow \tan \alpha = 1$

۲

$\Rightarrow \alpha = \frac{\pi}{4}$ ✓

۵

$$a) |A|_P \quad |B|_{-P} \Rightarrow \sqrt{(m_A - m_B)^2 + (y_A - y_B)^2} \Rightarrow \sqrt{4 + 36} \Rightarrow \sqrt{100} = 10 \checkmark$$

$$b) \left(\frac{m_A + m_B}{P}, \frac{y_A + y_B}{P} \right) \Rightarrow \left(\frac{-2 + 10}{P}, \frac{(-1 + 1)}{P} \right) \Rightarrow (-1, 1) \checkmark$$

2

6

$$a) |A|_{-10} \quad |B|_{-P} \quad |C|_P \Rightarrow \frac{-10 + (-1) + 10}{P} \Rightarrow \frac{-1 + 10}{P} = \frac{9}{P} = P \quad \text{و} \quad \frac{-10 + 10 + 1}{P} = \frac{-9}{P} = P \Rightarrow P = -9$$

$$b) \delta = \frac{1}{P} \begin{vmatrix} 10 & 1 & 1 \\ -1 & 10 & 1 \\ -10 & -1 & 1 \end{vmatrix} = -10 - 10 - 1 - 9 + 10 + 10 = \frac{8}{P} = P \Rightarrow P = 8$$

1, 2

7

$$a) -y = \frac{Pm+1}{Em-P} \quad b) y = \frac{-Pm+1}{-Em-P} \checkmark$$

$$c) y = \frac{Pm+1}{Em-P} \Rightarrow Eym - Py = Pm+1 \Rightarrow Eym - Pm = 1 + Py \Rightarrow m = \frac{1+Py}{Eg-P} \Rightarrow y = \frac{1+Pm}{Em-P} \checkmark$$

2

8

$$a) y \rightarrow -y \Rightarrow -y = \frac{-Pm+1}{-Em-P} \Rightarrow Em + Pm = -1 - Py \Rightarrow Em + Pm = -1 - Py \Rightarrow y = \frac{-1-Pm}{Em+P} \checkmark$$

$$b) m \rightarrow -m \Rightarrow -y = \frac{-Pm+1}{-Em-P} \Rightarrow Em + Pm = -1 - Py \Rightarrow Em + Pm = -1 - Py \Rightarrow y = \frac{-1-Pm}{Em+P} \checkmark$$

$$a) |A|_P \Rightarrow a' = m-P \quad y' = y+P \Rightarrow a = m+P, y = y'-P \Rightarrow \frac{P(m+P)+1}{(m+P)-P} = y'-P \Rightarrow \frac{Pm'+1}{m'-1} = y'-P$$

$$\frac{Pm'+1}{m'-1} = y' \Rightarrow \frac{Pm'+1}{m'-1} = y' \checkmark$$

2

9

$$b) m' = m-P, y' = y-P \Rightarrow m = m'+P, y = y'+P \Rightarrow \frac{P(m'+P)+1}{m'+P-P} = y'+P \Rightarrow \frac{Pm'+1}{m'} = y'+P$$

$$\Rightarrow \frac{y'}{m'} = y' \checkmark$$

$$a) \begin{cases} Pm+Py=2 \\ m-2y=1 \end{cases} \Rightarrow m = \frac{2+2y}{P} \Rightarrow Pm+Py=2 \Rightarrow 19y = -1 \Rightarrow y = -\frac{1}{19} \quad \text{و} \quad m = \frac{18}{19}$$

$$b) m = -\frac{\begin{vmatrix} 2 & P \\ 1 & -2 \end{vmatrix}}{\begin{vmatrix} P & P \\ 1 & -2 \end{vmatrix}} \Rightarrow -\frac{2-2P}{-2-P} = \frac{2-2P}{-2-P}$$

خبرم او غم باید با هم در بست بیاری :-

از طرفت جاندار
به منم
y = -1/19

1, 2

10

$$y = \frac{\begin{vmatrix} 1 & 1 \\ 1 & -2 \end{vmatrix}}{\begin{vmatrix} 1 & P \\ 1 & -2 \end{vmatrix}} = -\frac{1}{19}$$