

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۸۱ ... کلاس:

الف) $(\varepsilon, 2)$ $(\omega, -2)$ $m = \frac{\varepsilon}{1} \rightarrow y - 2 = -\varepsilon(x - \varepsilon) \rightarrow y = -\varepsilon x + 1\eta$

ب) $m = \frac{9}{-3} = -3$ $y - 2 = -3(x - \varepsilon) \rightarrow y = -3x + 1\varepsilon$

ج) $m = \frac{1}{3}$ $m' = 3 \rightarrow y - 2 = 3(x - \varepsilon) \rightarrow y = 3x - 1\omega$

د) $m = \tan 45 = \sqrt{10} \rightarrow y - 2 = \sqrt{10}(x - \varepsilon) \rightarrow y = \sqrt{10}x - \varepsilon\sqrt{10} + 2$

الف) $\sqrt{(x-3)^2 + (-1-2)^2} = \sqrt{10} = \omega$

$\sqrt{ay^2 + bx^2}$

ب) $\frac{3x + \varepsilon y - 10}{\sqrt{9+14}} = \frac{10}{0} = 2$ $\frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}}$

$\varepsilon x + 9y - 11 = 0$, $3x + \varepsilon y - 10 = 0$
 $\downarrow \times 3$

$\varepsilon x + 9y - 11 = 0 \rightarrow \varepsilon x + 9y - \frac{11 \cdot 10}{9} = 0 \rightarrow \varepsilon x + 9y - 12.2 = 0$

$3x + \varepsilon y = 10$

ب) $\frac{1\varepsilon - 61}{\sqrt{\varepsilon^2 + 9}} = \frac{2}{\sqrt{13}}$

$\frac{|ax + by - c|}{\sqrt{a^2 + b^2}} = \frac{|a'x + b'y - c'|}{\sqrt{a'^2 + b'^2}} \rightarrow \frac{|3x - 2y - 1|}{\sqrt{9+4}} = \frac{|x + 3y - 10|}{\sqrt{1+9}}$

$3x + 10y = 3$
 $-2y + 10x = 1$

$3x - 2y - 1 = 3x + 10y - 3 \rightarrow x - 12y = -2$

$3x - 2y - 1 = -2x - 10y + 3 \rightarrow 5x + 8y = 4$

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

$y = 3x + 1 \rightarrow m = 3$

$y = -3x + 3 \rightarrow m' = -3$

$\tan \varepsilon \omega = 1 \rightarrow \omega = 45^\circ = \frac{\pi}{4}$

الف) $\rightarrow \sqrt{(x+2)^2 + (-5-3)^2} = \sqrt{100} = 10$

ب) $\frac{x-2}{y} = -1 \quad \sim [-1, 1]$
 $\frac{x-2}{y} = 1$

$\left[\frac{x+2}{y}, \frac{y+5}{y} \right]$

الف) $\frac{x-10-4y}{y} = -3 \quad , \quad \frac{y}{y} = -3 \sim \left| \frac{-3}{-3} \right|$

$\frac{y}{y} = \frac{x}{x} = \frac{y+5}{y} = \frac{x+2}{y}$

ب) $S = \frac{1}{y} \begin{vmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -10 & -3 & 1 \end{vmatrix} = \frac{1}{y} (9 - 10 + 24 + 30 + 2 + 39) = 61$

الف) $y = \frac{x+1}{x-3}$

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

ب) $y = \frac{-x-1}{-x+3}$

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

د) $x = \frac{y+1}{y-3} \rightarrow x(y-3) = y+1 \rightarrow xy - 3x = y+1 \rightarrow xy - y = 1+3x \rightarrow y(x-1) = 1+3x$
 $y = \frac{1+3x}{x-1}$

الف) $\begin{cases} x' = x-2 \rightarrow x = x'+2 \\ y' = y+3 \rightarrow y = y'+3 \end{cases} \rightarrow y'-3 = \frac{2(x'+2)+1}{x'+2-3} \rightarrow y'-3 = \frac{x'+4}{x'-1} \rightarrow y' = \frac{x'+4}{x'-1} + 3$

ب) $\begin{cases} x' = x-3 \rightarrow x = x'+3 \\ y' = y-2 \rightarrow y = y'+2 \end{cases} \rightarrow y'+2 = \frac{2(x'+3)+1}{x'+3-2} \rightarrow y'+2 = \frac{x'+7}{x'+1} \rightarrow y' = \frac{x'+7}{x'+1} - 2 = \frac{x'+5}{x'+1}$

الف) $\begin{cases} x+2y = 2 \\ x-3y = 1 \end{cases} \rightarrow \begin{cases} x+2y = 2 \\ x-3y = -1 \end{cases} \rightarrow 19y = -1 \rightarrow y = -\frac{1}{19}, x = \frac{14}{19}$

ب) $y = \frac{\begin{vmatrix} 3 & 2 \\ 1 & 1 \end{vmatrix}}{\begin{vmatrix} 1 & 2 \\ 1 & -3 \end{vmatrix}} = \frac{-1}{19}$

$x = -\frac{\begin{vmatrix} 2 & 2 \\ -1 & 1 \end{vmatrix}}{\begin{vmatrix} 1 & 2 \\ 1 & -3 \end{vmatrix}} = \frac{14}{19}$