

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) $m = \tan 45 = \sqrt{10} \rightarrow y - 2 = \sqrt{10}(x - \varepsilon) \rightarrow y = \sqrt{10}x - \varepsilon\sqrt{10} + 2$	1
الف $\rightarrow \sqrt{(2 - 3)^2 + (-1 - 2)^2} = \sqrt{10} = \omega$ $\sqrt{ay^2 + bx^2}$ ب $\rightarrow \frac{3x + \varepsilon y - 10}{(2, 3)} \rightarrow \frac{(3(2) + \varepsilon(3) - 10)}{\sqrt{9 + \varepsilon^2}} = \frac{10}{\theta} = 2$ $\frac{ ax_0 + by_0 + c }{\sqrt{a^2 + b^2}}$	2
$\varepsilon x + 9y - 11 = 0$, $3x + \varepsilon y - 10 = 0$ $\downarrow \times 2$ $\varepsilon x + 9y - 11 = 0 \rightarrow \varepsilon x + 9y - \frac{11 \cdot 12}{2} = 0 \rightarrow \varepsilon x + 9y - 66 = 0$ $3x + \varepsilon y - 10 = 0 \rightarrow 3x + \varepsilon y = 10$ ب) $\frac{1\varepsilon - 61}{\sqrt{\varepsilon^2 + 9}} = \frac{2}{\sqrt{13}}$	3
$\frac{ ax + by - c }{\sqrt{a^2 + b^2}} = \frac{ a'x + b'y - c' }{\sqrt{(a')^2 + (b')^2}} \rightarrow \frac{ 3x - 2y - 1 }{\sqrt{9 + \varepsilon^2}} = \frac{ 3x + \varepsilon y - 10 }{\sqrt{9 + \varepsilon^2}} \rightarrow (3x - 2y - 1) = 3x + \varepsilon y - 10$ $3x - 2y - 1 = 3x + \varepsilon y - 10 \rightarrow x - 2y = -9$ $3x - 2y - 1 = -3x - \varepsilon y + 10 \rightarrow 6x + y = 11$	4
$\tan \alpha = \left \frac{m - m'}{1 + mm'} \right \rightarrow \left \frac{3 - (-3)}{1 + (-9)} \right = 1 \rightarrow \tan \varepsilon \omega = 1 \rightarrow \alpha = \varepsilon \omega = \frac{\pi}{4}$ $y = 3x + 1 \rightarrow m = 3$ $y = -3x + 3 \rightarrow m' = -3$	5

الف) $\rightarrow \sqrt{(x+2)^2 + (-5-3)^2} = \sqrt{100} = 10$ ب) $\frac{x-a}{r} = -1 \quad \sim [-1, 1]$ $\frac{x-r}{r} = 1$ $\left[\frac{x_1+x_2}{r}, \frac{y_1+y_2}{r} \right]$	6
الف) $\frac{x-10-4r}{r} = -3 \quad , \quad \frac{y}{r} = -3 \sim \begin{vmatrix} -3 \\ -3 \end{vmatrix}$ ب) $S = \frac{1}{r} \begin{vmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -10 & -3 & 1 \end{vmatrix} = \frac{1}{r} (9 - 10 + 24 + 30 + 2 + 39) = 61$ $\frac{y}{r} \rightarrow \frac{x}{r} = \frac{x_1+x_2+x_3}{r}$ $\frac{y_1+y_2+y_3}{r}$	7
الف) $y = \frac{2m+1}{5m-3}$ ب) $y = \frac{-2m-1}{-5m+3}$ ج) $x = \frac{2y+1}{5y-3} \rightarrow 5my - 3x = 2y+1 \rightarrow 5my - 2y = 1+3x \rightarrow y(5m-2) = 1+3x$ $y = \frac{1+3x}{5m-2}$ $\frac{y}{x} = m \rightarrow \frac{y}{x} = \frac{1+3x}{5m-2}$ د) $-x = \frac{-2y+1}{-5y-3} \rightarrow y = \frac{-3x+1}{5x+3}$	8
الف) $\begin{cases} x' = x-2 \rightarrow x = x'+2 \\ y' = y+3 \rightarrow y = y'+3 \end{cases} \rightarrow y'-3 = \frac{2(x'+2)+1}{x'+2-3} \rightarrow y'-3 = \frac{x'+4}{x'-1} \rightarrow y' = \frac{5x'+2}{x'-1}$ ب) $\begin{cases} x' = x-3 \rightarrow x = x'+3 \\ y' = y-2 \rightarrow y = y'+2 \end{cases} \rightarrow y'+2 = \frac{2(x'+3)+1}{x'+3-3} \sim y' = \frac{2x'+7}{x'} = \frac{2}{1} + \frac{7}{x'} = \frac{2}{1} + \frac{7}{x'}$	9
الف) $\begin{cases} 3x+5y=2 \\ x-3+2x-5y=1 \end{cases} \rightarrow \begin{cases} 3x+5y=2 \\ 3x-5y=1 \end{cases} \rightarrow 19y = -1 \rightarrow y = -\frac{1}{19}, x = \frac{14}{19}$ ب) $y = \frac{\begin{vmatrix} 3 & 2 \\ 1 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 5 \\ 1 & -5 \end{vmatrix}} = \frac{-1}{19}$ $x = -\frac{\begin{vmatrix} 5 & 2 \\ -5 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 5 \\ 1 & -5 \end{vmatrix}} = \frac{14}{19}$	10