

۱۵۰

بسم خدا

۲۰ آفرین!

Page: ()

SUBJECT:

Year:

Month:

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الف) $m = -\frac{4}{1} = -4 \rightarrow y = -4x + 14$ ✓ $m = -\frac{4}{2} = -2 \rightarrow y = -2x + 14$ ✓ (۱) (۲)

ج) $m = -\frac{1}{3} \rightarrow m' = 3 \rightarrow y = 3x - 10$ ✓ $m = \tan \frac{\pi}{4} = 1 \rightarrow y = x - 4\sqrt{3} + 2$ ✓

الف) $\sqrt{3^2 + 4^2} = 5$ ✓ $\frac{|3x + 4y - 14|}{\sqrt{3^2 + 4^2}} = \frac{14}{5} = 2.8$ ✓ (۲) (۳)

$3x + 4y = 14$ $3x + 4y = 10$ ✓ $\frac{|14 - 10|}{\sqrt{3^2 + 4^2}} = \frac{4}{5} = \frac{2}{\sqrt{13}}$ ✓ (۲) (۳)

$\frac{|3x - 2y - 1|}{\sqrt{3^2 + 2^2}} = \frac{|3x + 2y - 3|}{\sqrt{3^2 + 2^2}}$ $3x - 2y - 1 = -3x - 2y + 3 \Rightarrow 6x + y = 4$ ✓ $3x - 2y - 1 = 3x + 2y - 3 \Rightarrow x - 4y = -2$ ✓ (۲) (۴)

$m_1 = -3/m_2 = 2 \rightarrow \tan \alpha = \left| \frac{-3 - 2}{1 - 4} \right| = 1 \rightarrow \alpha = \frac{\pi}{4}$ ✓ (۲) (۵)

الف) $\sqrt{1^2 + 4^2} = 5$ ✓ $\left(\frac{-5 + 3}{2}, \frac{4 - 2}{2} \right) = \left(-1, 1 \right)$ ✓ (۲) (۶)

الف) $\frac{3 - 2 - 10}{3} = -2$ $\frac{1 + 3 - 13}{3} = -2$ $\rightarrow \begin{vmatrix} 3 & -2 \\ 1 & -2 \end{vmatrix} = 4$ ✓ $\frac{1}{4} \begin{vmatrix} -10 & -2 & 3 \\ -10 & 3 & 1 \\ 1 & 1 & 1 \end{vmatrix} = \frac{1}{4} (-10 - 2 - 39 - 9 + 10 - 24) = -14$ ✓ (۲) (۷)

الف) $-y = \frac{2x + 1}{4x - 3} \rightarrow y = \frac{2x + 1}{3 - 4x}$ ✓ $y = \frac{2x + 1}{-4x - 3}$ ✓ $x = \frac{2y + 1}{4y - 3} \rightarrow y = \frac{2x + 1}{4x - 3}$ ✓ (۱) (۲)

$x + 1 = -\frac{2y + 1}{4y + 3} \rightarrow y = -\frac{2x - 1}{4x + 3} \Rightarrow y = \frac{2x + 1}{4x + 3}$ ✓

الف) $x' = x - 2 \rightarrow x = x' + 2$ $y' = y + 3 \rightarrow y = y' - 3$ $\rightarrow y' - 3 = \frac{x' + 2 + 1}{x' + 2 - 3} \rightarrow y' = \frac{x' + 5}{x' - 1}$ ✓ (۲) (۳)

ب) $x' = x - 3 \rightarrow x = x' + 3$ $y' = y - 2 \rightarrow y = y' + 2$ $\rightarrow y' + 2 = \frac{x' + 3 + 2}{x' + 3 - 2} \rightarrow y' = \frac{x' + 5}{x' - 1}$ ✓ (۲) (۴)

الف) $3x + 4y = 2$
 $-3x + 10y = -2$
 $14y = -1 \rightarrow y = -\frac{1}{14}$ ✓

$x + \frac{5}{14} = \frac{19}{14} \rightarrow x = \frac{14}{14} = 1$ ✓

$\begin{vmatrix} 3 & 4 \\ 1 & -10 \end{vmatrix} = -34$ $\begin{vmatrix} 4 & 2 \\ -10 & 1 \end{vmatrix} = -42$ (۲) (۵)

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

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