

۱۸, ۲۵

نام و نام خانوادگی آبرو آرزو پاسخنامه تشریحی تکلیف شماره ۱۵ کلاس A

الف) $m = \frac{-1-1}{1-1} = -1 \rightarrow y-1 = -1(x-1) \rightarrow y = -x+1$ دقت! ۱, ۲, ۵

ب) $|y+x=0| \rightarrow y = -x \rightarrow m = -1 \Rightarrow y-1 = -1(x-1) \Rightarrow y = -x+1$ ✓

ج) $x+y=1 \rightarrow y = -\frac{1}{2}x + \frac{1}{2} \rightarrow m = -\frac{1}{2} \rightarrow m' = 2 \Rightarrow y-1 = 2(x-1) \Rightarrow y = 2x-1$ ✓

د) $m = \tan \frac{\pi}{3} = \sqrt{3} \rightarrow y-1 = \sqrt{3}(x-1) \Rightarrow y = \sqrt{3}x - \sqrt{3} + 1$ ✓

الف) $|AB| = \sqrt{(7-3)^2 + (-1-1)^2} = 5$ ✓

ب) $d = \frac{|3(1) + 4(3) - 3|}{\sqrt{9+16}} = \frac{10}{5} = 2$ ✓ $3x+4y=3 \rightarrow 3x+4y-3=0$
 $a=3, b=4, c=-3$

الف) $\rightarrow \begin{cases} 2x+y=11 \\ 2x+y=1 \end{cases} \rightarrow 2x+y = \frac{11+1}{2} \rightarrow 2x+y=6$ ✓

ب) $\rightarrow \begin{cases} 2x+y=11 \\ 2x+y=1 \end{cases} \rightarrow d = \frac{|11-1|}{\sqrt{4+1}} = \frac{10}{\sqrt{5}} = \frac{2\sqrt{5}}{1} = 2\sqrt{5}$ ✓

$3x-2y-1=0, 3x+2y-3=0$

$\frac{|3x+2y-1|}{\sqrt{9+4}} = \frac{|3x+2y-3|}{\sqrt{9+4}} \rightarrow |3x-2y-1| = |3x+2y-3|$ $3x-2y-1 = -3x-2y+3$
 $6x = 4 \Rightarrow x = \frac{2}{3}$ ✓

$y = -3x+3, y = 3x+3$
 $m = -3, m' = 3$

$\tan \alpha = \left| \frac{-3-3}{1-9} \right| = 1 \rightarrow \alpha = \frac{\pi}{4}$ ✓

الف) $|AB| = \sqrt{(-5-3)^2 + (2+1)^2} = \boxed{6}$ ✓

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ب) $M = \left(\frac{-5+3}{2}, \frac{2-1}{2} \right) \rightarrow M(-1, 1)$ ✓

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الف) $x_G = \frac{-10-2+3}{3} = -3, y_G = \frac{-13+3+1}{3} = -3 \rightarrow (-3, -3)$ ✓

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ب) $A = \frac{1}{2} |x_1(y_2 - y_3) + x_2(y_3 - y_1) + x_3(y_1 - y_2)|$
 $= \frac{1}{2} |4 \cdot 1 + 1 \cdot 0 + 0| = \boxed{2}$ ✓

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

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

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

الف) $x' = x-2, y' = y+3 \rightarrow y+3 = \frac{2(x-2)+1}{x-2+1} \rightarrow y = \frac{2x-3}{x-1} - 3 \rightarrow y = \frac{-x}{x-1}$
 اینجا و بعده نه ✓

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ب) $x' = x-3, y' = y-2 \rightarrow y-2 = \frac{2(x-3)+1}{x-3+1} \rightarrow y = \frac{2x-5}{x-2} + 2 \rightarrow y = \frac{4x-1}{x-2}$
 جواب صفحه بعد ...

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$\begin{cases} 3x+4y=2 \\ x-5y=1 \end{cases}$

الف) $\begin{cases} 3x+4y=2 \\ -3x+15y=-3 \end{cases}$

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$19y = -1 \rightarrow y = -\frac{1}{19} \rightarrow x = \frac{14}{19}$ ✓

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ب) $D = \begin{vmatrix} 3 & 4 \\ 1 & -5 \end{vmatrix} = -19, D_x = \begin{vmatrix} 2 & 4 \\ 1 & -5 \end{vmatrix} = -14, D_y = \begin{vmatrix} 3 & 2 \\ 1 & 1 \end{vmatrix} = 1$ ✓

$x = \frac{D_x}{D} = \frac{-14}{-19} = \frac{14}{19}, y = \frac{D_y}{D} = \frac{1}{-19} = -\frac{1}{19}$

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

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الف

$$y' = \frac{5x' + 2}{x' - 1}$$

$$y' = \frac{7}{x'}$$

ب) منته به مورد قبل