

۱۹،۷۵ آفرین!

نام و نام خانوادگی: مدرسه: باسرخنامه تشریحی تکلیف شماره ۱۵ کلاس: از دهم به سر ۳

الف) $\frac{-2-2}{5-4} = -4 \xrightarrow{14} \boxed{y_1 - 4x + 18} \checkmark$

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ب) $2y + 6x_1 - 1 \rightarrow y_1 - 3x - \frac{1}{2} \xrightarrow{14} \boxed{y_1 - 3x + 14} \checkmark$

ج) $x + 3y_1 - 1 \rightarrow y_1 - \frac{1}{3}x + \frac{1}{3} \xrightarrow{14} \boxed{y_1 - \frac{1}{3}x + \frac{1}{3}} \checkmark$

د) $\tan \frac{\pi}{3} = \sqrt{3} \xrightarrow{14} \boxed{y_1 - \sqrt{3}x - 4\sqrt{3} + 2} \checkmark$

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

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ب) $\frac{|6+12-3|}{\sqrt{9+16}} = \frac{15}{5} = 3 \checkmark$

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$\frac{8+12}{2}$

الف) $2x + 3y = 6 \xrightarrow{2} 4x + 6y = 12, 4x + 6y = 8 \rightarrow \boxed{4x + 6y = 10} \checkmark$

ب) $\frac{|12-8|}{\sqrt{16+36}} = \frac{4}{\sqrt{52}} = \frac{\sqrt{52}}{13} = \frac{2\sqrt{13}}{13} \checkmark$

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

$\frac{|3x-2y-1|}{\sqrt{9+4}} = \frac{|2x+3y-3|}{\sqrt{4+9}} \rightarrow \begin{cases} 3x-2y-1 = 2x+3y-3 \\ \boxed{5y-x-2} \checkmark \end{cases}$

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$x + 3y = 3, x - 2y = 5 \rightarrow \begin{cases} x - 3y = 3 \\ x - 2y = 5 \end{cases} \xrightarrow{m=3} \begin{cases} x - 3y = 3 \\ x - 2y = 5 \end{cases} \xrightarrow{m=2} \begin{cases} x - 3y = 3 \\ x - 2y = 5 \end{cases}$

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$\tan \alpha = \left| \frac{2-3}{1-6} \right| = 1 \rightarrow \boxed{\alpha = \frac{\pi}{4} = 45^\circ} \checkmark, \boxed{\beta = 180 - 45 = 135^\circ}$

الف) $\sqrt{(-5-3)^2 + (4-2)^2} = \sqrt{64+36} = 10$ ✓

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ب) $\begin{vmatrix} \frac{-5+3}{2} \\ \frac{4-2}{2} \end{vmatrix} \rightarrow \begin{vmatrix} -1 \\ 1 \end{vmatrix}$ ✓

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الف) $x_1 = \frac{-10-2+3}{3} = -3, x_2 = \frac{-13+3+1}{3} = -3$ $\begin{vmatrix} -3 \\ -3 \end{vmatrix}$ ✓ ١, ٧, ٥

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ب) $\frac{1}{2} \begin{vmatrix} -10 & -13 & 1 \\ -2 & 3 & 1 \\ 3 & 1 & 1 \end{vmatrix} = \frac{-30-39-2-9+10+26}{2} = \frac{-22}{2} = -11$ ٤٨

الف) $-y, \frac{2x+1}{4x-3}$ ✓

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ب) $x_1 = \frac{-2x+1}{-4x-3}$ ✓

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ج) $x_1 = \frac{2y+1}{4y-3} \rightarrow x_2 = \frac{1+3x}{4x-2}$ ✓

د) $x_1 = \frac{-2y+1}{4y-3} \rightarrow x_2 = \frac{1-3x}{4x+2}$ ✓

الف) $\begin{vmatrix} x' & x-2 \\ y' & y+3 \end{vmatrix} = \begin{vmatrix} x' & x+2 \\ y' & y-3 \end{vmatrix} \rightarrow \frac{2(x'+2)+1}{x'+2-3} = y'-3 \rightarrow y' = \frac{5x'+2}{x'-1}$ ✓

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

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الف) $\begin{cases} 3x+4y=2 \\ 3x-5y=1 \end{cases} \rightarrow 19y=-1 \rightarrow y = -\frac{1}{19}, x = \frac{14}{19}$ ✓

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ب) $x_1 = \frac{\begin{vmatrix} 4 & 2 \\ 5 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ 1 & -5 \end{vmatrix}} = \frac{-14}{-19} = \frac{14}{19}, y_1 = \frac{\begin{vmatrix} 3 & 2 \\ 1 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ 1 & -5 \end{vmatrix}} = \frac{1}{-19} = -\frac{1}{19}$ ✓

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