

۱۸,۵

نام و نام خانوادگی صبا پاسخنامه تشریحی تکلیف شماره ۱۸... کلاس یازدهم

(الف) $(4x+2)(5x-2) \rightarrow \begin{cases} 4a+b=2 \\ 20a+b=-2 \end{cases} \rightarrow \begin{matrix} a=-\frac{1}{4} \\ b=1 \end{matrix} \rightarrow y = -\frac{1}{4}x + 1$

(ب) $m = -\frac{4}{5} = -\frac{4}{5} \rightarrow -\frac{4}{5}x + b = 2 \rightarrow b = 1\frac{4}{5} \rightarrow y = -\frac{4}{5}x + 1\frac{4}{5}$

(ج) $m = \frac{1}{4} \xrightarrow{\text{عکس}} m' = 4 \rightarrow 4x + b = 2 \rightarrow b = -2 \rightarrow y = 4x - 2$
 $\frac{1}{m} \times m' = -1 \rightarrow m' = -4$
 $y = 4x - 10$ (د)

$\tan \frac{\pi}{4} = \sqrt{3} = m \quad \sqrt{3}x + b = 2 \rightarrow b = 2 - 4\sqrt{3} \quad y = \sqrt{3}x + 2 - 4\sqrt{3}$

(الف) $\sqrt{(4+9)^2 + (2-4)^2} = \sqrt{9+16} = 5$

(ب) $\frac{|4+12-4|}{\sqrt{4+16}} = \frac{12}{\sqrt{20}} = \frac{6}{\sqrt{5}}$

$2x+3y-4=0 \xrightarrow{\times 2} \begin{cases} 4x+6y-8=0 \\ 4x+4y-12=0 \end{cases}$

$ax+by=C+C' \rightarrow 4x+4y+0=0$

$d = \frac{|C-C'|}{\sqrt{a^2+b^2}} = \frac{|-8+12|}{\sqrt{4^2+4^2}} = \frac{4}{4\sqrt{2}} = \frac{1}{\sqrt{2}}$

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

$\rightarrow |2x-3y-1| = |2x+3y-2|$
 $\begin{cases} 2x-3y-1 = 2x+3y-2 \rightarrow -6y+1=0 \rightarrow x-2y+1=0 \\ 2x-3y-1 = -(2x+3y-2) \rightarrow 4x-6y+1=0 \end{cases}$

$\tan \alpha = \left| \frac{m-m'}{1+mm'} \right| = \left| \frac{-\frac{1}{2}-2}{1+(-1)} \right| = 1 \rightarrow \tan \alpha = 1 \rightarrow \alpha = \frac{\pi}{4}$

$m = -\frac{1}{2}$
 $m' = 2$

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

(الف)

$$M = \begin{vmatrix} \frac{3-5}{2} = -1 \\ -\frac{2+4}{2} = -3 \end{vmatrix}$$

(ب)

$$\text{مركز ثقل} = \begin{vmatrix} x = \frac{3-10}{3} = -3 \\ y = \frac{1+13}{3} = -4 \end{vmatrix}$$

$$\begin{vmatrix} -3 \\ -4 \end{vmatrix}$$

(الف)

$$\begin{vmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -10 & -13 & 1 \end{vmatrix}$$

$$S = \frac{1}{6} | 9-10+14+10+19+1 | = \frac{49}{6} = 8.17$$

(ب)

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

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

ج) $x = \frac{2y+1}{5y-2} \rightarrow y = \frac{2+1}{5x-2} = \frac{3x+1}{5x-2} = y \rightarrow y = \frac{3x+1}{5x-2}$

د) $-x = \frac{-2y+1}{-5y-2} \rightarrow x = \frac{2y-1}{-5y-2}$ $y = \frac{2x-1}{-5x-2} \rightarrow \frac{2x-1}{-5x-2} = y$

الف) $y' = y+2$ $x' = x-2$
 $y = y'+2$ $x = x'+2$

$$y'-2 = \frac{2x'+4+1}{x'+2-2} \rightarrow y' = \frac{2x'+5}{x'-1} + 2 =$$

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

ب) $y' = y-2$
 $y = y'+2$

$$x' = x-2$$

$$y'+2 = \frac{2x'+4+1}{x'+2-2} \rightarrow y' = \frac{2x'+5}{x'} - 2 = \frac{2}{x'}$$

الف) $\begin{cases} 3x+5y=2 \\ x-5y=1 \end{cases} \xrightarrow{\times 5} \begin{cases} 3x+5y=2 \\ 5x-25y=5 \end{cases}$

$$3x+5y=2$$

$$\rightarrow 19y = -1 \rightarrow y = -\frac{1}{19}$$

$$x = \frac{15}{19}$$

ب) $x = -\frac{12+10}{-5-12} = \frac{-22}{-17} = \frac{12}{19}$

$$y = \frac{9-4}{-5-12} = \frac{5}{-17} = -\frac{1}{19}$$

$$x = -\frac{2-(-1)}{-15-2} = \frac{1}{17}$$

$$\frac{3-2}{-15-2} = -\frac{1}{17}$$