

الف) $m \leq \frac{dy}{dx} \leq \frac{1-(1)}{1-2} = \frac{0}{-1} = 0 \Rightarrow y \leq -x + b$ (۱)

$y = -x + b$ (۲)

ب) $x + y \leq b$ (۳)

۱) $x + y \leq b \Rightarrow y \leq -x + b$ (۴)

۲) $x + y \leq -1 \Rightarrow y \leq -x - 1$ (۵)

الف) $\sqrt{x^2 + y^2} = 1$ (۶)

ب) $\frac{|x^2 + y^2 - 1|}{\sqrt{2}}$ (۷)

الف) $x + y \leq 1$ (۸)

$x + y \leq 1$ (۹)

ب) $x + y \leq 1$ (۱۰)

$\frac{|x - y|}{\sqrt{2}} = \frac{1}{\sqrt{2}}$ (۱۱)

$\frac{|x - y - 1|}{\sqrt{2}} = \frac{|x + y - 1|}{\sqrt{2}}$ (۱۲)

$x - y - 1 \leq x + y - 1 \Rightarrow 2y \geq -2 \Rightarrow y \geq -1$ (۱۳)

$x - y - 1 \leq -(x + y - 1) \Rightarrow 2x \geq 0 \Rightarrow x \geq 0$ (۱۴)

$y \leq x + 1$
 $y \geq -x - 1$

and $\left| \frac{m - m'}{1 + mm'} \right| = \left| \frac{1 + 1}{1 - 1} \right| = \frac{0}{0} \Rightarrow 1 \leq \theta \leq \pi$ (۱۵)

الف) $\sqrt{(3-1.5)^2 + (5-1.5)^2} = \sqrt{10.5} = 1. \checkmark$

(2) (4)

ب) $m \mid \frac{m-1}{2} \leq 1 \Rightarrow m \mid -1 \checkmark$

الف) $M \mid \frac{m_1+m_2+m_3}{3} = \frac{1+2+3}{3} = 2 \quad m \mid -2 \checkmark$

(2) (4)

ب) $\frac{1}{2} \mid \begin{vmatrix} 1 & 2 & 3 \\ 1 & 2 & 3 \\ 1 & 2 & 3 \end{vmatrix} = \frac{1}{2} (1-1+2+3+3+2) = \frac{1}{2} \cdot 10 = 5 \checkmark$

الف) $-y \leq \frac{m-1}{m-2} \Rightarrow y \leq \frac{1-m}{m-2} \checkmark$

(2) (1)

ب) $y \leq \frac{m-1}{m-2} \checkmark$

2) $x \leq \frac{y-1}{y-2} \Rightarrow y \leq \frac{m-1}{m-2} \checkmark$

3) $-x \leq \frac{y-1}{y-2} \Rightarrow x \leq \frac{y-1}{y-2} \Rightarrow y \leq \frac{m-1}{m-2} \checkmark$

الف) $y'-2 \leq \frac{n'-1}{n'-2} \Rightarrow y' \leq \frac{n'-1}{n'-2} \checkmark$

$n' \leq n-2$
 $y' \leq y-2$ (2) (9)

ب) $y'-2 \leq \frac{n'-1}{n'-2} \Rightarrow y' \leq \frac{n'-1}{n'-2} \checkmark$

$n' \leq n-2$
 $y' \leq y-2$

الف) $\begin{cases} m+n+2y \leq 2 \\ n-2y \leq 1 \end{cases} \xrightarrow{2-3} \begin{cases} m+n+2y \leq 2 \\ -m-2y \leq -1 \end{cases} \Rightarrow y \leq -\frac{1}{19} \Rightarrow n \leq \frac{1}{19} \checkmark$

(2) (1)

ب) $x \leq -\frac{1-(-1)}{-10-1} = -\frac{1}{19} \leq \frac{1}{19} \quad y \leq \frac{m-1}{-10-1} = -\frac{1}{19} \checkmark$