

$$9a - 18 + 3a + b = 0 \rightarrow 12a - 18 + b = 0 \rightarrow 12a + b = 18 \quad a \neq 2 \quad (1)$$

$$x = -\frac{a}{2(a-2)} = 2 \quad -a = 4(a-2) \quad - \therefore b = 12a + 18$$

$$a = \frac{12}{5} \quad 12\left(\frac{12}{5}\right) + b = 18 \rightarrow b = -\frac{18}{5}$$

$$\Delta \leq 0 \rightarrow 4 - 4(2-m^2) \rightarrow 4 - 8 + 4m^2 \leq 0 \rightarrow 4m^2 \leq 4 \rightarrow m^2 \leq 1$$

$$-1 \leq m \leq 1$$

$$1 - (-1) = (2) \quad (2)$$

$$4 - x^2 \geq 0 \rightarrow 4 \geq x^2 \quad 4 \geq x^2 \rightarrow -2 \leq x \leq 2$$

$$-4, -2, -2, -1, 1, 2, 2, 4 \quad (69)$$

$$[x] + [-x] + 1 \neq 0$$

$$(الف) \quad x^2(x+2) \geq 0$$

$$\begin{array}{c} x \\ 0 \quad -2 \quad 2 \\ + \quad \phi \quad - \quad \phi \quad + \end{array} \quad Df = [-2, +\infty)$$

$$(ب) \quad \frac{(x-1)(x+1)(x^2)(x-2)}{(x-1)(x+1)(x+1)}$$

$$\begin{array}{c} x \\ 0 \quad -1 \quad 1 \quad 2 \\ + \quad \phi \quad + \quad + \quad - \quad \phi \quad + \end{array}$$

$$Df = (-\infty, 1) \cup [2, +\infty)$$

$$(الف) \quad |x-2| - 3 \geq 0 \rightarrow |x-2| \geq 3$$

$$x-2 \geq 3 \rightarrow x \geq 5 \quad x-2 \leq -3 \rightarrow x \leq -1$$

$$Df = (-\infty, -1] \cup [5, +\infty) \quad (70)$$

$$(ب) \quad 4 - |2-x| \geq 0 \rightarrow 4 \geq |2-x| \rightarrow -4 \leq 2-x \leq 4$$

$$-4 \leq -x \leq 2$$

$$4 \geq x \geq -2$$

$$Df = [-2, 4]$$

$$(الف) \quad 1 - x|x| \geq 0 \rightarrow 1 \geq x|x|$$

$$0 \leq x|x| \leq 1$$

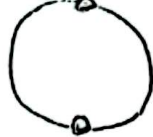
$$Df = (-\infty, 1] \quad (71)$$

$$(ب) \quad 3 - |x-5| \neq 1 \quad 2 \neq |x-5| \rightarrow x \neq 7 \quad x \neq 3$$

$$3 - |x-5| \geq 0 \rightarrow 3 \geq |x-5| \rightarrow -1 \leq x-5 \leq 1 \rightarrow 4 \leq x \leq 6$$

$$Df = [4, 6]$$

الف) $\cos x \neq 0$

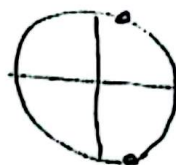


$Df = \mathbb{R} - \left\{k\pi + \frac{\pi}{2}\right\}$

⑤

ب) $2 \cos x - 1 \neq 0$

$2 \cos x \neq 1$
 $\cos x \neq \frac{1}{2}$



$Df = \mathbb{R} - \left\{2k\pi \pm \frac{\pi}{3}\right\}$

الف) $|2x-1| - |x+3| \neq 0 \rightarrow |2x-1| \neq |x+3|$

⑥

$2x-1 \neq x+3 \rightarrow x \neq 4$ $Df = \mathbb{R} - \{4\}$

ب) $|x+1| - |x+2| < 0 \rightarrow |x+1| < |x+2| \rightarrow x+1 < x+2$
 $x < 1$

$Df = (-\infty, 1)$

$x-1 < 0 \rightarrow x < 1 \rightarrow x < \frac{1}{2}$

⑦

$\log_{\omega}^{x-1} < 0 \rightarrow x-1 < 1 \rightarrow x < 2 \rightarrow x < 1$

$Df = (-\infty, 1)$

$\log_{\omega}^{(x-1)} < 0 \rightarrow \log_{\omega}^{x-1} < 1 \rightarrow x-1 < \omega \rightarrow x < \omega+1$
 $x < \omega+1$

الف) $(\cos x + 1) < 0 \rightarrow \cos x < -1 \rightarrow \cos x < -\frac{1}{2}$

$Df = \left(2k\pi - \frac{2\pi}{3}, 2k\pi + \frac{2\pi}{3}\right)$



⑧

ب) $\log_{n+1}^{n-1} < 0 \rightarrow \frac{n-1}{n+1} < 1 \rightarrow \frac{n-1}{n+1} < \frac{-1}{n+1} \rightarrow \frac{-1}{n+1} < 1$

$\frac{-1}{n+1} < 1$

$\frac{n-1}{n+1} < 0 \rightarrow \frac{-1}{n+1} < 0$

$(-\infty, -1) \cup [1, +\infty)$

$Df = (-\infty, -1)$

$(-\infty, -1)$