

$$2x' + 2x + 1 = y' + 4y = 0 \quad 1(x-1)' + (y+2)' = 0 \quad \boxed{x - y + 1 = 11}$$

$$1(x' - 1) + y' + 4y = 12 = 0 \quad (x-1)' + (y+2)' = 0$$

$$2(x^2 - 2x + 1) y' + 4y + 9 = 0 \quad \boxed{x=1} \quad \boxed{y=-2}$$

$$x=a \quad a' + fa = \cancel{ra} + r \Rightarrow a' + a = 2 \rightarrow a(a+1) = 2 \rightarrow a=1$$

$$1+f=0$$

$$x = -2 \quad 2x' - b = a + 2x \rightarrow 11 - b = a + 4 \rightarrow 11 - 4 = a + b$$

$$4x - a \geq 0 \quad 4x \geq a \rightarrow x \geq \frac{a}{4}$$

$$b - 2x \geq 0 \quad 2x \leq b \rightarrow x \leq \frac{b}{2}$$

$$\frac{a}{4} \leq x \leq \frac{b}{2}$$

$$\frac{1}{4} \leq x \leq \frac{1}{2}$$

$$\left(\frac{1}{4}\right) = \frac{b}{a}$$

الن) $|x-2| \neq 0 \Rightarrow x \neq 2$

$$\frac{x+1}{|x-2|} \geq 0 \quad x+1 \geq 0 \quad \Delta < 0$$

$$x \geq -1$$

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

ب) $[x] - 4 \geq 0 \Rightarrow [x] \geq 4$

$$1 - [x] \geq 0 \Rightarrow [x] \leq 1$$

الن) $\frac{x^2 - x - 6}{x^2 - 12x^2 + 26} \geq 0$

$-\infty$	-2	-1	2	3	$+\infty$
+	-	-	+	+	

$$D = (-\infty, -2) \cup (2, +\infty) - \{3\}$$

ب) $[x] - 4 \geq 0 \Rightarrow [x] \geq 4$

$-\infty$	-2	-1	1	2	3	$+\infty$
+	+	-	+	-	+	

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

الن) $[x] \geq 2 \quad D = (-\infty, +2]$

ب) $[x] \geq 2 \quad D = (-\infty, -1) \cup [-2, 2) \cup [2, +\infty)$

$-\infty$	-1	-2	2	$+\infty$
+	0	-	0	+

الن) $\cos x \neq 0, \sin x \neq 0, \tan x \neq 1$

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

ب) $1 - \sin^2 x \geq 0$

$$\sin^2 x \leq 1 \Rightarrow \sin x \geq -\frac{1}{2}$$

$$D = \left[k\pi - \frac{\pi}{2}, k\pi + \frac{\pi}{2}\right]$$

الن) $1 - \frac{1}{x} \geq 0 \rightarrow x \geq 1$

$$x - 1 \geq \frac{1}{x} \quad x > \frac{1}{x} \rightarrow 0 < \frac{1}{x} < 1$$

$$D = \left[\frac{1}{x}, +\infty\right)$$

ب) $(-2, -1) \cup (1, +\infty)$

$$x^2 - 3x \neq 4 \rightarrow x \neq 4, 1$$

$$x^2 - 3x \geq 0 \rightarrow \frac{x}{x-3} \geq 0$$

$-\infty$	0	3	$+\infty$
+	-	+	

$$D = (-\infty, 0) \cup (3, +\infty) - \{1, 4\}$$

$$الف) \quad 1, Fx - x^2 > 2x$$

$$Fx - x^2 > 2 \quad -x^2 + Fx - 2 > 0$$

$$x^2 - Fx + 2 < 0$$

$$(x - \frac{F}{2})(x - 1)$$

$$D = [1, 2]$$

$$ب) \quad \frac{Fx + a}{Fx + F} \in W$$

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$$D = \{x \mid x = \frac{-Fx + a}{Fx + F}, k \in W\}$$