

دوسری شکل

$$x=0 \Rightarrow y = 1 - \log_c^{-b} = 2 \Rightarrow b = -\frac{1}{c} \quad b + c = -\frac{1}{c} \Rightarrow -\frac{1}{c} + c = -\frac{1}{c} \Rightarrow c^2 + \frac{1}{c} = -\frac{1}{c}$$

$$\Rightarrow c^2 + 2c - 1 = 0 \Rightarrow c = \frac{1}{2} \quad \left. \begin{array}{l} c = \frac{1}{2} \\ c = -\frac{1}{2} \end{array} \right\} \begin{array}{l} b = -2 \\ b = 2 \end{array}$$

$$x=1 \Rightarrow y = 1 - \log_c^{-1.5a-b} = 0 \Rightarrow \log_c^{-1.5a-b} = 1 \Rightarrow -1.5a - b = c$$

$$\Rightarrow -1.5a + 1.5 = 2 \Rightarrow a = 1 \Rightarrow (a+c)b = (1+\frac{1}{2})(-2) = -3$$

$$x=0 \Rightarrow y = c + \log_c b = 2 \Rightarrow -\log_c b + 2 = c$$

$$x=1 \Rightarrow y = c + \log_c^{-1.5a-b} = 0 \Rightarrow 2 - \log_c b + \log_c^{-1.5a-b} = 0 \Rightarrow \log_c^{-1.5a-b} = \log_c b - 2$$

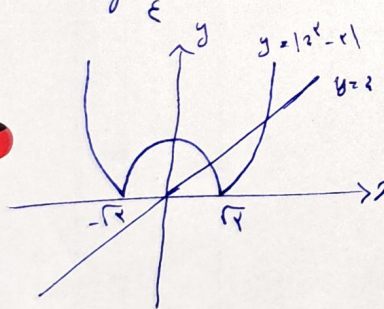
$$\Rightarrow \log_c^{-1.5a-b} = \log_c \frac{b}{c^2} \Rightarrow -1.5a - b = \frac{b}{c^2} \Rightarrow \frac{a}{b} = -\frac{1}{c}$$

$$x=0 \Rightarrow f(0) = 1 + c x^a = \frac{1}{c} \Rightarrow c x^a = -\frac{1}{c}$$

$$x=1 \Rightarrow f(1) = 1 + c x^a = 0 \Rightarrow c x^a x^b = -1 \Rightarrow (-\frac{1}{c}) x^b = -1 \Rightarrow b = 1$$

$$x=-1 \Rightarrow f(-1) = 1 + c x^a = \frac{1}{c} = 1 + \frac{-1}{c} = 1 - \frac{1}{c} = \frac{1}{c} \Rightarrow c = 1$$

$f(x) = \log_{\epsilon}(x^2 - x - 2)$   $\Rightarrow |x^2 - x - 2| > 0 \Rightarrow |x^2 - x| > 2 \Rightarrow x^2 - x > 2$



$x^2 - x > 2 \Rightarrow x^2 - x - 2 > 0 \Rightarrow (x+1)(x-2) > 0$

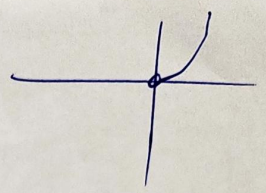
$$\Rightarrow x \in [(-\infty, -1] \cup [2, \infty)$$

$$x^2 - x < 2 \Rightarrow x^2 - x - 2 < 0 \Rightarrow (x-1)(x+2) < 0$$

$$\Rightarrow (-2, 1) \Rightarrow Pf = (-\infty, 1) \cup (2, \infty)$$



الف)  $y = 4 \log^2 x = 2 \log^2 x = 2^x \Rightarrow D_{y,x} = (0, +\infty)$



ب)  $y = \log 2^x \Rightarrow 2^x > 0 \Rightarrow x \neq 0 \Rightarrow y = x \log 2 \Rightarrow D_y = \mathbb{R} - \{0\}$

