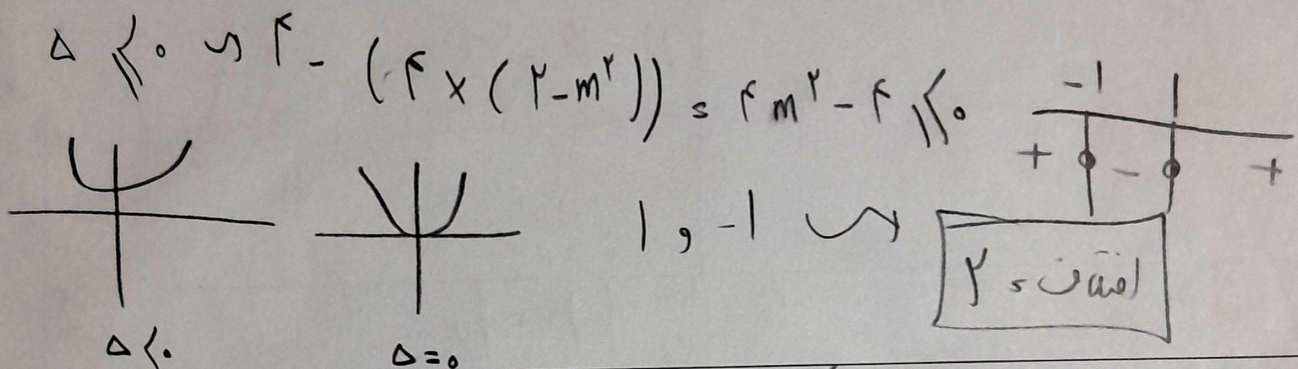


$$a - 2 = 0 \Rightarrow a = 2 \quad f(x) = \sqrt{2x + b}$$

$$x = 3 \rightarrow y = 0 \Rightarrow 2(3) + b = 0 \Rightarrow \boxed{b = -6}$$



$4 - x^2 \geq 0 \Rightarrow (4 - x)(4 + x) \geq 0$

نقطه انتهای مع = $-2, -1, 0, 1, 2, 3, 4$

$\bar{0} \leftarrow 0 \leftarrow x \in \mathbb{Z} \leftarrow [x] + [x]$
 $\bar{0} \in \sim -1 \leftarrow x \notin \mathbb{Z}$

$\frac{(x+1)(x-1)(x^2)(x-3)}{(x-1)(x^2+x+1)} \geq 0$

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

$x^3 + 3x^2 \geq 0$
 $x^2(x+3) \geq 0$

$D = [-3, +\infty)$

$4 - |2 - x| \geq 0$

$x < 0, 4 - 2 + x \geq 0 \rightarrow x \geq -2$
 $x \geq 0, 4 + 2 - x \geq 0 \rightarrow x \leq 6$

$D = [-2, 6]$

$|x - 2| - 3 \geq 0$

$x < 0, 2 - x - 3 \geq 0 \rightarrow -1 \geq x$
 $x \geq 0, x - 2 - 3 \geq 0 \rightarrow x \geq 5$

$D = (-\infty, -1] \cup [5, +\infty)$

$r- x-a \geq 0, \neq 1$ $r \geq x-a \rightarrow r \geq x-a \rightarrow 1 \geq x$ $r \geq x-a \rightarrow r \geq a-x \rightarrow r \leq x$ $r- x-a \neq 1 \vee 1-a-x \neq 1 \rightarrow x \notin \mathbb{N}$ $D = (0, 1] - \mathbb{N}$	$1-x x \geq 0 \vee x \geq x x $ $(0, 1] \leftarrow \begin{matrix} \text{و} + \\ \text{و} - \end{matrix}$ $D = (-\infty, 1]$
$r \cos x - 1 \neq 0 \vee \cos x \neq \frac{1}{r}$ $\emptyset$ $D = \mathbb{R} - \left\{ r k \pi \pm \frac{\pi}{r} \right\}$	$\cos x \neq 0$ $D = \mathbb{R} - \left\{ k \pi + \frac{\pi}{r} \right\}$
$ 2x+1 - x+3 \geq 0$ $ 2x+1 \geq x+3 \rightarrow \begin{matrix} \text{تفاوت} \\ x^2 + 4x + 1 \geq x^2 + 6x + 9 \end{matrix}$ $x^2 - 2x - 8 \geq 0 \quad \Delta = 4 + 32 = 36 \rightarrow x_1 = \frac{2+\sqrt{36}}{2} = 5, x_2 = \frac{2-\sqrt{36}}{2} = -2$ $\begin{matrix} -\frac{5}{2} & 2 \\ + & - & + \end{matrix}$ $D = \mathbb{R} - \left(-\frac{5}{2}, 2 \right)$	$ 2x+1 - x+3 \neq 0$ $ 2x+1 = x+3 $ $2x+1 = x+3 \vee x=2$ $2x+1 = -x-3 \vee x = -\frac{4}{3}$ $D = \mathbb{R} - \left\{ 2, -\frac{4}{3} \right\}$
$2x-1 > 0 \vee x > \frac{1}{2}$ $\log_2^{(2x-1)} > 0 \rightarrow 2x-1 > 1 \rightarrow x > 1$ $\log_2^{(2x-1)} > 0 \vee \log_2^{(2x-1)} > 1 \rightarrow 2x-1 > 2 \rightarrow x > \frac{3}{2}$ $x > \frac{3}{2} \rightarrow D_f = x > \frac{3}{2}$	$\log_2^{(2x-1)} > 0 \rightarrow 2x-1 > 1 \rightarrow x > 1$ $\log_2^{(2x-1)} > 1 \rightarrow 2x-1 > 2 \rightarrow x > \frac{3}{2}$
$\frac{x-1}{x+1} > 0 \vee \frac{-1}{+1+}$ $\log_2 \frac{x-1}{x+1} > 0 \vee \frac{x-1}{x+1} \geq 1$ $\frac{x-1-x-1}{x+1} \geq 0 \rightarrow \frac{-2}{x+1} \geq 0 \rightarrow x < -1$	$\cos x + 1 > 0$ $\cos x > -\frac{1}{r}$ $D = \mathbb{R} - \left[r k \pi + \frac{r \pi}{r}, r k \pi + \frac{r \pi}{r} \right]$

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