

$$\sqrt{\frac{x^2 - 4x + 4}{x^2 - 10x + 16}} \geq 0 \quad \frac{1}{+} \frac{1}{-} \frac{1}{+} \frac{1}{-} \frac{1}{+} \quad \frac{(x-4)(x-1)}{(x-2)(x-1)} \quad (-\infty \quad] \cup [4 \quad \cup [1 \quad \cup \infty)$$

$$b) \frac{\sqrt{4x^2 - 2x + 3}}{\sqrt{3x^2 - \sqrt{2}x + 6}} > 0 \Rightarrow \frac{(4x+1)(x-3)}{(3x-1)(x-1)}$$

$$\sqrt{\frac{2n^2 - 2n + 1}{2n^2 - 2n + 1}} \geq 0$$

$$\sqrt{n} + \sqrt{n-1} = \sqrt{r} \Rightarrow \sqrt{n-1} = \sqrt{r} - \sqrt{n} \Rightarrow n-1 = r + n - 2\sqrt{r}\sqrt{n}$$

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$$y \Delta = r + n - r\sqrt{r+n+1}$$

$$0 \leq \sqrt[n]{n} - \sqrt[n]{n-1}$$

$$\sqrt{2n} \lambda_1 \Rightarrow \underline{\lambda_1}$$

$A = \{1, 2, 3\} \quad B = \{2, 3\}$

1) $A \times B - B^c = \{(1,2), (1,3), (2,2), (2,3), (3,2), (3,3)\} - \{(1,2), (1,3), (2,2), (2,3)\} = \{(3,2), (3,3)\}$

$m^2 = m + 1 \Rightarrow m^2 - m - 1 = 0 \Rightarrow (m-2)(m+1) \leq -1 \Rightarrow m = 2 \Rightarrow (2, 6) \times$

$f(a) = \{(2, m^2), (2, 1), (-2, m), (-2, m), (2, m+1), (m, f)\}$

$\frac{-1}{2} = \checkmark$

2) $g(a) = \{(2, m^2), (2, 1), (m, f), (2, m+1), (-2, m), (-1, 2)\}$

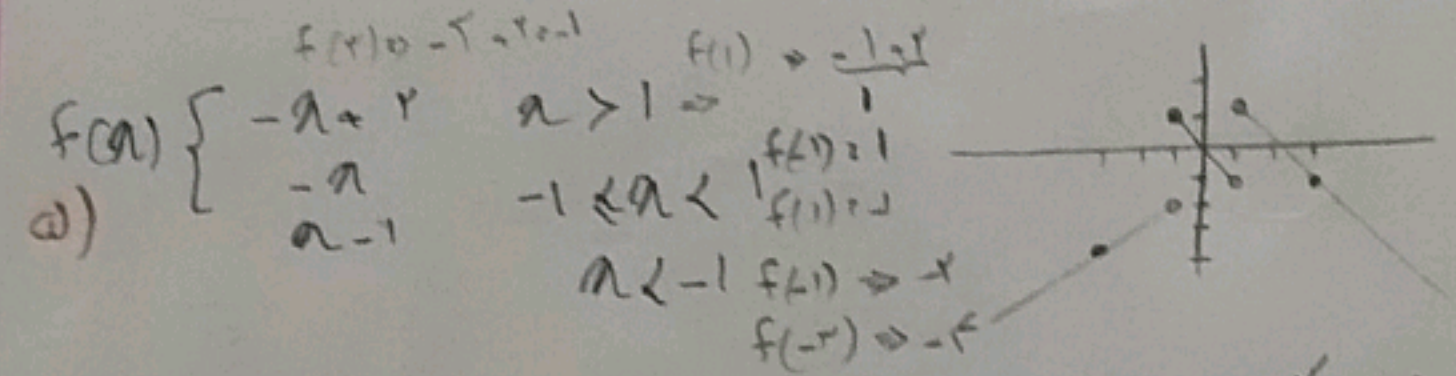
$\Rightarrow \frac{-1}{2} \Rightarrow (2, 1) (-1, 2) \checkmark$

$\{(-2, 6), (2, 1), (2, 2), (2, 3), (-2, 4), (-1, 2)\}$

$2 \Rightarrow x$

3) $f(a) = \begin{cases} a^2 - 1 & a < 1 \\ a + b & 1 \leq a \leq 2 \\ a^2 & a > 2 \end{cases}$ $f(1) = 1 - 1 = 0$
 $1 \leq a \leq 2 \Rightarrow a + b = 0, f(2) = 2 + b = 1 \Rightarrow a + b = 1 \Rightarrow a = 1, b = 0$
 $a > 2 \Rightarrow f(a) = a^2 \Rightarrow a = 1 \Rightarrow a = 1, b = 0$

4) $f(a) = \begin{cases} a - 2 & a \geq 2 \\ 2 - a & a < 2 \end{cases}$ $f(2) = 0 \Rightarrow a = 2 \Rightarrow a = 2, b = 0$



$u = (-\infty, -2) \cup [-1, 1]$

$x^2 + y^2 + 1 = 0 \Rightarrow x^2 + y^2 = -1 \Rightarrow x^2 + y^2 = 1 \Rightarrow x = 1, y = 0$

5) $x^2 + y^2 - 2x - 12y + 17 = 0 \Rightarrow (x-1)^2 + (y-6)^2 = 0 \Rightarrow x = 1, y = 6$

$a \sin u = u \sin a \Rightarrow a = 1 \Rightarrow 1 \cdot \sin u = u \Rightarrow \sin u = u \Rightarrow u = 0 \Rightarrow a = 0$

6) $(\sqrt{\frac{a}{v}} + \sqrt{\frac{v}{a}})^2 = 4 \Rightarrow \frac{a}{v} + \frac{v}{a} + 2\sqrt{\frac{a}{v} \cdot \frac{v}{a}} = 4 \Rightarrow \frac{a^2 + v^2}{av} + 2 = 4 \Rightarrow \frac{a^2 + v^2}{av} = 2 \Rightarrow a^2 + v^2 = 2av \Rightarrow (a-v)^2 = 0 \Rightarrow a = v$

7) $\sqrt{\frac{a-1}{a-2}} + \sqrt{\frac{2-m}{m}} = 1 \Rightarrow \sqrt{a-1} + \sqrt{2-m} = \sqrt{a-2} + \sqrt{m}$

$\sqrt{a} + \sqrt{a-1} = 1 \Rightarrow a = 1$

8) $\sqrt{a^2 - 4a + 4} > \sqrt{a - 1} \Rightarrow a^2 - 4a + 4 > a - 1 \Rightarrow a^2 - 5a + 5 > 0$

