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$$A \times B \rightarrow \{(1, 2), (1, 3), (2, 2), (2, 3), (3, 2), (3, 3)\}$$

$$B^c \rightarrow \{(2, 2), (2, 3), (3, 2), (3, 3)\} \quad (2)$$

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

$$\text{دو} \rightarrow m^2 - m - 2 \geq 0 \Rightarrow (m-2)(m+1) \geq 0 \Rightarrow m \geq 2, -1$$

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$$\text{دو} \rightarrow m^2 - m - 2 \geq 0 \Rightarrow (m-2)(m+1) \geq 0 \Rightarrow m \geq 2, -1$$

$$(2, 1), (2, 2) \rightarrow X$$

$$(-1, 3), (-1, 2) \rightarrow X$$

مجموعه
تغییر

$$f(x) = \begin{cases} x^2 - 1 & x \leq 1 \\ ax + b & 1 < x \leq 2 \\ x^2 & x \geq 2 \end{cases} \rightarrow a + b = 0 \quad (2)$$

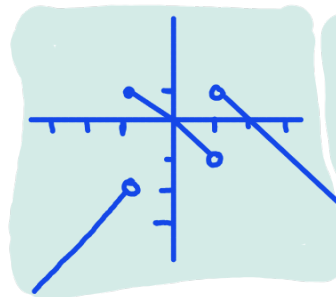
$$1 - 2a + a = 0 \Rightarrow a = 1, b = -1 \Rightarrow a \times b = -1$$

$$2k - 3 \geq -3k \Rightarrow 5k \geq 0 \Rightarrow k \geq 0$$

3

(2)

$$f(x) = \begin{cases} -x + 2 & x > 1 \\ -x & -1 \leq x \leq 1 \\ x - 1 & x < -1 \end{cases}$$



$$D_f = \mathbb{R} - \{1\}$$

$$R_f = (-\infty, 1]$$

(2)

$$\text{دو} \rightarrow \begin{cases} y_1^2 = x^2 - 1 \\ y_2^2 = x^2 - 1 \end{cases} \rightarrow x y_1^2 = x y_2^2 \rightarrow \text{خط}$$

(2)

$$\text{دو} \rightarrow \begin{cases} y_1^2 - 1 = y_2^2 - 1 \\ y_1(y_1 - 1) = y_2(y_2 - 1) \end{cases} \rightarrow$$

خط

$$y_1(y_1 - 1) = y_2(y_2 - 1) \rightarrow \text{خط}$$

$\lim_{x \rightarrow 0} \frac{\sin y}{y}, \frac{\sin x}{x} \rightarrow 1$
 $\lim_{x \rightarrow 0} \frac{\sin y}{y} = 1, \lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$
 $\lim_{x \rightarrow 0} \frac{\sin y}{y} = 1, \lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$

$\lim_{x \rightarrow 0} \frac{x}{y} + \frac{y}{x} + x^2 y^2 \rightarrow \frac{x^2 + y^2}{xy} \rightarrow x^2 + y^2 + 2xy \rightarrow x^2 + y^2 - 2xy = 0 \rightarrow (x-y)^2 = 0 \rightarrow y = x \rightarrow$
 $\lim_{x \rightarrow 0} \frac{x}{y} + \frac{y}{x} + x^2 y^2 = 2$

$\lim_{x \rightarrow 0} y \left(\sqrt{\frac{x-1}{x-4}} + \sqrt{\frac{x-2}{x}} \right)$
 $\frac{1}{+0-0+} \cap \frac{0}{-0+0-} \rightarrow D_f = (0, 1]$

$\lim_{x \rightarrow 0} \sqrt{y-1} = \sqrt{x-4} \rightarrow \sqrt{x-4} \geq 0 \rightarrow x \geq 4 \rightarrow$
 $x \leq 4 \rightarrow D_f = [0, 4]$

$\lim_{x \rightarrow 0} \frac{\sqrt{x^2 - 4x + 4}}{\sqrt{x-1} \ln x + 14} \rightarrow (x-1)(x-4) \rightarrow \frac{1}{+0-0+}$
 $\frac{1}{+0-0+} \cap \frac{0}{-0+0-} \rightarrow D_f = (-\infty, 1]$

$\lim_{x \rightarrow 0} \frac{\sqrt{x^2 - 4x + 4}}{x^2 - 1 \ln x + 14} \rightarrow (x-1)(x-4) \rightarrow \frac{1}{+0-0+}$
 $\frac{1}{+0-0+} \cap \frac{0}{-0+0-} \rightarrow D_f = (-\infty, 1] \cup (4, 1] \cup (1, +\infty)$

$\lim_{x \rightarrow 0} \frac{\sqrt{x^2 - 6x + 9}}{\sqrt{x^2 - 4x + 4}} \rightarrow (x-3)(x-4) \rightarrow \frac{1}{+0-0+}$
 $\frac{1}{+0-0+} \cap \frac{0}{-0+0-} \rightarrow D_f = (-\infty, 1) \cup \left[\frac{4}{3}, +\infty\right)$

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$$p \rightarrow \sqrt{\frac{x^2 - \sqrt{a}x + c}{x^2 - 10x + 14}} \rightarrow \frac{(x-2)(x-3)}{(x-4)(x-5)}$$

$$D_f = (-\infty, 1) \cup (1, \frac{4}{5}) \cup [\frac{5}{4}, +\infty)$$

$$\begin{array}{c} \frac{1}{x} \quad \frac{1}{x} \quad \frac{1}{x} \\ + \quad + \quad - \quad + \\ \hline \end{array}$$

(Y)