

جواباً

Subject.

$$\sqrt{\frac{x^2 - 14}{x^2 - 5x + 2}} \geq 0 \quad \frac{(x-2)(x+2)}{(x-1)(x-2)} + \frac{-5}{1} + \frac{1}{2} + \frac{2}{2} \quad \mathbb{R} - (-2, 1] \cup \{2\}$$

$$y = \sqrt{2 - \sqrt{2 - x}} \geq 0 \rightarrow 2 - \sqrt{2 - x} \geq 0 \rightarrow 2 \geq \sqrt{2 - x} \quad (\Delta)$$

$$\mathbb{R} - (-\infty, -12] \cup (2, \infty)$$

$$y = \sqrt{x - \sqrt{x - 2}} \geq 0 \quad \{x\} \quad x - \sqrt{x - 2} \geq 0 \rightarrow x \geq \sqrt{x - 2} \rightarrow 4 \geq x - 2 \rightarrow x \leq 6$$

$$\mathbb{R} - (-\infty, -12] \cup (2, \infty)$$

$$y = \sqrt{2 - x^2} \geq 0 \rightarrow 2 - x^2 \geq 0 \rightarrow x^2 \leq 2 \rightarrow -\sqrt{2} \leq x \leq \sqrt{2} \quad [-\sqrt{2}, \sqrt{2}]$$

$$y = \sqrt{2|x| - 9} \geq 0 \rightarrow 2|x| - 9 \geq 0 \rightarrow |x| \geq \frac{9}{2} \rightarrow x \geq \frac{9}{2} \text{ or } x \leq -\frac{9}{2}$$

نہی ان کا تعین نہیں ہو سکتا

$$|x| - 2 \neq 0 \rightarrow |x| \neq 2 \quad \mathbb{R} - \{2, -2\}$$

$$\sqrt{x - 2} \neq 0 \rightarrow \sqrt{x - 2} \neq 2 \rightarrow x - 2 \neq 4 \rightarrow x \neq 6 \quad \mathbb{R} - \{6\}$$

$$\frac{\sin x}{2 \cos x - 1} \rightarrow 2 \cos x - 1 \neq 0 \rightarrow 2 \cos x \neq 1 \rightarrow \cos x \neq \frac{1}{2} \quad \mathbb{R} - \{2k\pi + \frac{\pi}{3}, 2k\pi - \frac{\pi}{3}\}$$

$$2 \sin x + 1 \rightarrow \sin x \neq -\frac{1}{2} \rightarrow \mathbb{R} - \{2k\pi + \frac{7\pi}{6}, 2k\pi - \frac{5\pi}{6}\}$$

$$\cot x \neq 1 \rightarrow x \neq \frac{\pi}{4}, \frac{5\pi}{4} \quad \mathbb{R} - \{\frac{\pi}{4}, \frac{5\pi}{4}\}$$

$$2 \cos x \neq 0 \rightarrow \cos x \neq 0 \rightarrow x \neq \frac{\pi}{2}, \frac{3\pi}{2} \quad \mathbb{R} - \{\frac{\pi}{2}, \frac{3\pi}{2}\}$$

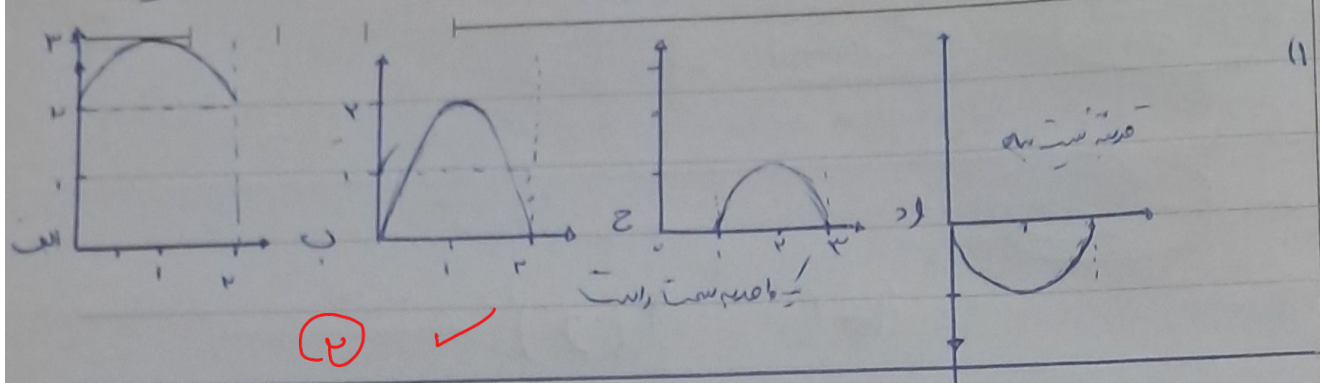
$$\sqrt{2|x - 2| - \frac{1}{2}} \geq 0 \rightarrow 2|x - 2| - \frac{1}{2} \geq 0 \rightarrow 2|x - 2| \geq \frac{1}{2} \rightarrow |x - 2| \geq \frac{1}{4}$$

$$x \in \mathbb{R} - (\frac{7}{4}, \frac{9}{4})$$

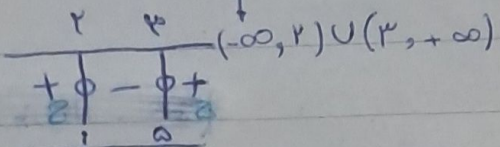
$$x - 2|x| \geq 0 \rightarrow x \geq 2|x| \rightarrow x \geq 2x \text{ or } x \leq -2x \rightarrow x \leq 0 \text{ or } x \geq 0 \rightarrow \mathbb{R} - \{0\}$$

Subject: Brid

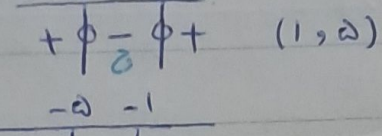
حل المسألة



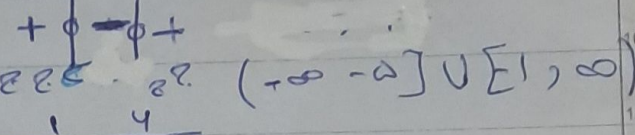
1) $x^2 - 5x + 4 > 0 \rightarrow (x-1)(x-4)$



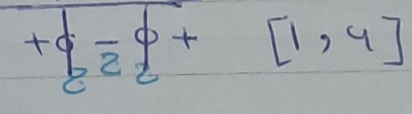
2) $x^2 - 4x + 4 < 0 \rightarrow (x-1)(x-4)$



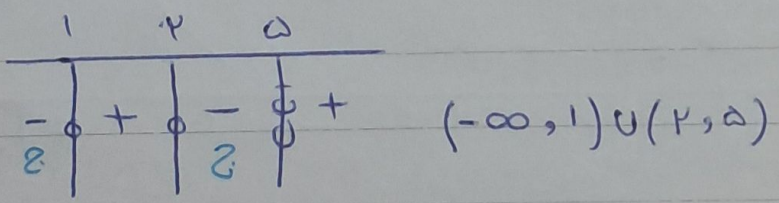
3) $x^2 + 4x + 4 \geq 0 \rightarrow (x+1)(x+4)$



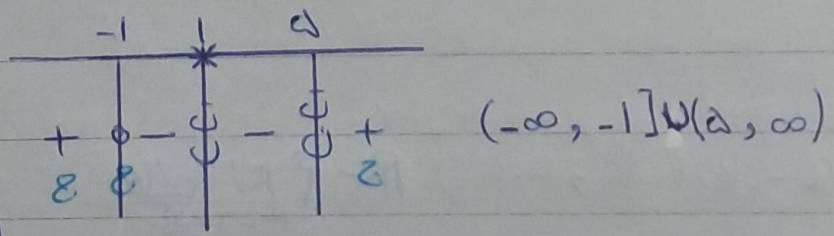
4) $x^2 - 7x + 4 \leq 0 \rightarrow (x+1)(x-4)$



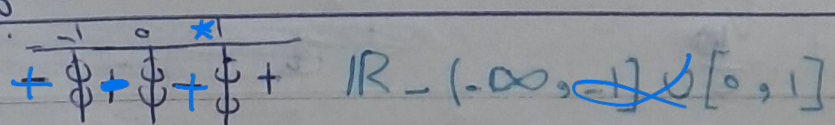
5) $\frac{x^2 - 3x + 2}{(x-5)} < 0$



6) $\frac{x^2 - 1}{x^2 - 4x + 4} \geq 0$



7) $\frac{(x-1)(x-5)}{x^2 - 4x + 4} \geq 0$



8) $\sqrt{\frac{x^2 - 1}{x^2 - 4x + 4}} \geq 0$

$\rightarrow x(x-1) \geq 0 \rightarrow x(x-1)(x+1) \geq 0$