

$$x^2 - 5x + p \begin{cases} S = 1 + 3 = 4 = a \\ P = 1 \times 3 = 3 = b \end{cases}$$

اور 3 ریشہ ہوا

(1)

$$a + b = 7$$

(2) بعد از ا- علامت عوض نشدہ میں ا- علامت میں $(x - 3n)^2$ ریشہ میں ا- ا- ا- ا-

$$-1 - 3n = 0 \rightarrow n = -\frac{1}{3}$$

چون $(x - 3n)^2$ ہمیشہ + علامت میں علامت کیں عبارت میں $(k - 2)$ میں علامت

بعد از ک میں علامت میں $k - 2 < 0$ $k < 2$ میں $k = 1$ علامت میں

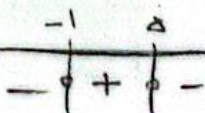
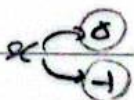
$$-k + m - 1 = 0$$

$$m = 1$$

ریشہ عبارت میں علامت

$$\frac{m}{n} + k = \frac{1}{-\frac{1}{3}} + 1 = -14$$

$$-\frac{1}{3}x^2 + 2x + \frac{1}{3} > 0 \rightarrow -x^2 + 6x + 1 > 0$$



(3)

$$(a, b) \rightarrow (-1, 5) \rightarrow b - a = 6$$

$$x^3 - 3x^2 - x + 3 < 0 \rightarrow \begin{array}{c} \textcircled{-1} \\ \textcircled{-1} \end{array} \quad \begin{array}{c} -1 \\ | \\ + \\ | \\ - \\ | \\ + \end{array} \rightarrow (-1, 1) \quad \textcircled{5}$$

$$f(0) = 0 - 3(0) - 0 + 3 = 3 \quad \textcircled{3}$$

$$x - 1 < 0 \rightarrow x < 1 \rightarrow (-\infty, 1) \leftarrow \text{نقطة 1} \quad \textcircled{5}$$

$$x^2 + 1 - 2x - 3x + 3 = (x-1)(x-5) < 0 \leftarrow \text{نقطة } \Delta$$

$$\begin{array}{c} 1 \\ | \\ + \\ | \\ - \\ | \\ + \end{array} \begin{array}{c} 5 \\ | \\ - \\ | \\ + \end{array} \rightarrow (1, 5)$$

$$(-\infty, 1) \cap (1, 5) = \emptyset \quad \textcircled{\emptyset}$$

$$\frac{m^2(m^2+1)}{m-2} > 0 \rightarrow \begin{array}{c} 0 \\ | \\ - \\ | \\ - \\ | \\ + \end{array} \begin{array}{c} 2 \\ | \\ - \\ | \\ + \end{array} \quad (2, +\infty) \quad \textcircled{6}$$

$$\begin{array}{c} * \\ -2 \\ | \\ + \\ | \\ - \\ | \\ * \\ 2 \\ | \\ - \\ | \\ + \end{array} \begin{array}{c} 1 \\ | \\ - \\ | \\ + \end{array} \begin{array}{c} 3 \\ | \\ - \\ | \\ + \end{array}$$

$$-2, 3, 1 = \text{نقطة صفرية} \quad \textcircled{7}$$

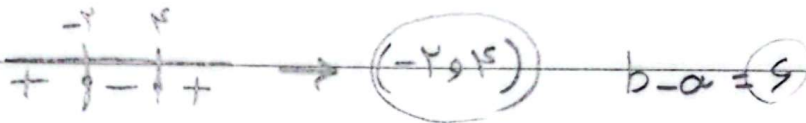
نقطة صفرية

$$[-2, 2) \cup (2, 3]$$

* \rightarrow Closed

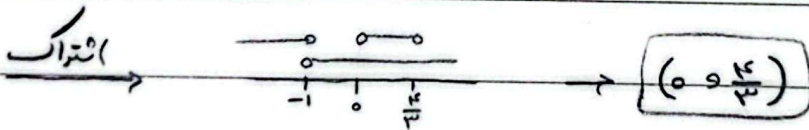
$$\frac{3x^2 - 2x}{x^2 + 1} < 1 \rightarrow \frac{3x^2 - 2x - x^2 - 1}{x^2 + 1} < 0 \quad (1)$$

$$\frac{x^2 - 2x - 1}{x^2 + 1} \rightarrow \frac{(x-1)(x+2)}{x^2 + 1} < 0$$



$$\frac{x(3x-1)}{x+1} < 0 \rightarrow \begin{array}{c} - \quad | \quad + \quad | \quad - \quad | \quad + \\ \hline \end{array} \quad (-\infty, -1) \cup (0, \frac{1}{3}) \quad (9)$$

$$\frac{3x^2 - 4x + x + 1}{x+1} > 0 \rightarrow \frac{3x^2 - 3x + 1}{x+1} > 0 \quad \begin{array}{c} + \\ \hline \end{array} \quad (-1, +\infty)$$



$$\frac{x^2 - 10 - 3x}{x} \leq 0 \rightarrow \frac{(x-5)(x+2)}{x} \leq 0 \quad (10)$$

