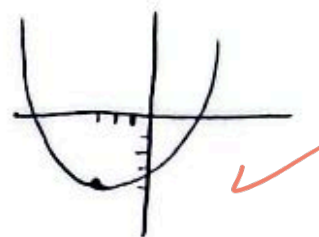
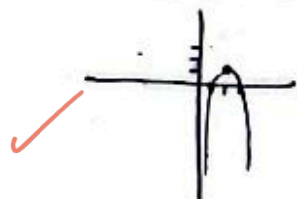


$$\text{Min} \begin{vmatrix} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{vmatrix} \Rightarrow \text{Min} \begin{vmatrix} -3 \\ -4 \end{vmatrix}$$



$$\text{Max } x \begin{vmatrix} 2 \\ 1 \end{vmatrix}$$



$$x^2 - 4x + 3 = 0$$

$$\Rightarrow (x-1)(x-3) = 0$$

$$x=1, \quad x=3$$

در نقاط

★ برای اینکه جواب ۳ قسمت اول را بدست آوریم باید حواسمان به Δ باشد.

الف) دو جواب متمایز حقیقی: $a < \frac{9}{8}$

ب) یک جواب مضاعف: $a = \frac{9}{8}$

ج) بدون جواب حقیقی: $a > \frac{9}{8}$

د) $a = 18 - [\frac{9}{8}]$ بیشه داشته باشد.

بیشه مضاعف

یا بیشه مضاعف $a \leq \frac{9}{8}$

بیشه مضاعف

$$\text{الف) } x^2 - 2x - 1 = 0 \Rightarrow x^2 - 2x = 1 \Rightarrow x^2 - 2x + 1 = 2 \Rightarrow (x-1)^2 = 2 \Rightarrow x-1 = \pm\sqrt{2} \Rightarrow x = \pm\sqrt{2} + 1$$

$$\text{ب) } x^2 - x - 1 = 0 \Rightarrow x^2 - x = 1 \Rightarrow x^2 - x + \frac{1}{4} = \frac{5}{4} \Rightarrow (x - \frac{1}{2})^2 = \frac{5}{4} \Rightarrow x - \frac{1}{2} = \pm\sqrt{\frac{5}{4}} \Rightarrow x = \pm\sqrt{\frac{5}{4}} + \frac{1}{2}$$

$$\Rightarrow x = \pm\sqrt{\frac{5}{4}} + \frac{1}{2}$$

$$\text{الف) } x^2 - 2x - 1 = 0 \Rightarrow \frac{2 \pm \sqrt{4+4}}{2} \Rightarrow \begin{cases} x = 1 + \sqrt{2} \\ x = 1 - \sqrt{2} \end{cases}$$

$$\text{ب) } x^2 + x - 4 = 0 \Rightarrow \frac{-1 \pm \sqrt{1+16}}{2} \Rightarrow \begin{cases} x = \frac{-1 + \sqrt{17}}{2} \\ x = \frac{-1 - \sqrt{17}}{2} \end{cases}$$

$$\text{الف) } 2x^2 - 11x + 18 = 0 \Rightarrow x^2 - 5x + 9 = 0 \Rightarrow x(x-5) - 4(x-5) = 0$$

$$\Rightarrow (x-5)(x-4) = 0 \Rightarrow x-5=0 \Rightarrow x=5$$

$$\Rightarrow x-4=0 \Rightarrow x=4$$

$$\text{ب) } x^2 + 3x - 18 = 0 \Rightarrow x^2 + 7x - 4x - 18 = 0 \Rightarrow x(x+7) - 4(x+7) = 0$$

$$\Rightarrow (x-4)(x+7) = 0 \Rightarrow x-4=0 \Rightarrow x=4$$

$$\Rightarrow x+7=0 \Rightarrow x=-7$$

$$\text{الف) } 5x^2 - 12x + 7 = 0 \Rightarrow x^2 - 12x + 35 = 0 \Rightarrow (x-5)(x-7) = 0$$

$$\Rightarrow x = \frac{7}{5}$$

$$\Rightarrow x = 1$$

$$\text{ب) } 2x^2 - 10x + 7 = 0 \Rightarrow x^2 - 10x + 21 = 0 \Rightarrow (x-3)(x-7) = 0 \Rightarrow x = 1$$

$$\Rightarrow x = \frac{7}{2}$$

$$2x^2 - \Delta x + 3 = 0 \Rightarrow \frac{\Delta \pm \sqrt{1}}{4} = \begin{cases} 1 \\ \frac{3}{4} \end{cases}$$

$$2x^2 + \Delta x + 3 = 0 \Rightarrow \frac{-\Delta \pm \sqrt{1}}{4} = \begin{cases} -1 \\ -\frac{3}{4} \end{cases}$$

$$2x^2 - \Delta x + 1 = 0 \Rightarrow \frac{\Delta \pm \sqrt{17}}{4} = \begin{cases} \frac{\Delta + \sqrt{17}}{4} \\ \frac{\Delta - \sqrt{17}}{4} \end{cases}$$

$$4x^2 + 7x + 9 = 0 \Rightarrow \Delta = \sqrt{49 - 144} \Rightarrow \Delta = \sqrt{-95} \Rightarrow \text{میں حالات دلتا منفی ہے جس کا جواب بنیاداً نہیں ہے}$$

$$S^2 - 2P = 9 + 4 = 13$$

$$S = 3$$

$$P = -2$$

$$S^2 - 3SP = 2V + 18 = 4\Delta$$

$$\binom{V}{\Delta} + \binom{9}{2} = \frac{V!}{\Delta! 2!} + \frac{9!}{7! 2!} = \frac{\Delta \cdot 4}{2 \cdot 2} + 36 = 21 + 36 = 57 = \frac{\Delta V}{2}$$

$$\binom{9}{3} - \binom{1}{2} = \frac{9!}{6! 3!} - \frac{1!}{2! 1!} = \frac{\Delta \cdot 4}{6} - \frac{\Delta}{2} = 14 - 21 = -7$$