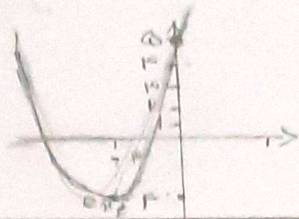


$$y = x^2 + 4x + 6$$

$$x \neq \left| \begin{array}{c} -b \\ p\alpha \\ -\Delta \\ p\alpha \end{array} \right|$$

$$\Delta = b^2 - 4ac$$

$$4 - 4 = 0$$



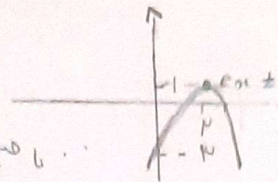
$$\min \left| \frac{-4}{2} = -2 \right|$$

$$\min \left| -\frac{4}{2} = -2 \right|$$

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

عرفا از حد

... با مبادله، مبادله، مبادله ...



$$\max \left| \frac{4}{-2} = -2 \right|$$

رسمی

$$x^2 + 4x + 6 = (x+3)(x+1) = 0 \rightarrow x = -3, x = -1$$

$$2x^2 - 3x + 1 = 0$$

$$9 - 12\alpha > 0 \rightarrow \alpha < \frac{3}{4} \leftarrow b^2 - 4ac \leftarrow \Delta > 0 \leftarrow \alpha \text{ اقل}$$

$$\frac{9}{4} = \alpha \leftarrow \Delta = 0 \leftarrow \alpha \text{ مساوی}$$

$$\frac{9}{4} < \alpha \leftarrow -\Delta < 0 \leftarrow \alpha \text{ بزرگتر}$$

$$9 - 12\alpha \geq 0 \rightarrow \alpha \leq \frac{3}{4} \leftarrow \Delta \geq 0 \leftarrow \Delta > 0, \Delta = 0 \leftarrow \alpha \text{ بزرگتر}$$

$$x^2 - 2x - 1 = 0 \rightarrow (x-1)^2 - 2 = 0 \leftarrow \alpha \text{ اقل}$$

$$x-1 = \pm \sqrt{2} \leftarrow (x-1)^2 = 2 \rightarrow x-1 = \pm \sqrt{2} \rightarrow x = \sqrt{2} + 1$$

$$x-1 = -\sqrt{2} \rightarrow x = -\sqrt{2} + 1$$

$$x^2 - x - 1 = 0$$

$$x^2 - x - 1 = \frac{1}{p} + \frac{1}{p} = \left(x - \frac{1}{p}\right)^2 - \frac{1}{p^2} = 0 \rightarrow x = \frac{1 \pm \sqrt{5}}{2} + \frac{1}{p}$$

$$x^2 - px - 1 = 0$$

$$\Delta = b^2 - 4ac \rightarrow p^2 + 4 = 1 / x = \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \frac{p \pm \sqrt{p^2 + 4}}{2} = 1 \pm \sqrt{p}$$

$$x^2 + x - 1 = 0$$

$$1 + 1 = 1 \rightarrow x = \frac{-1 \pm \sqrt{5}}{2}$$

$$x^2 - 11x + 21 = 0$$

الف

$$(x - 7)(x - 3) \rightarrow x = 7 / x = 3$$

$$x^2 + 3x - 21 = 0$$

ب

$$(x + 7)(x - 3) \rightarrow x = 3, x = -7$$

$$5x^2 - 12x + 7 = 0 \rightarrow x^2 - 12x + 35 = 0 \rightarrow$$

الف

$$(x - 7)(x - 5) = 0 \rightarrow x = \frac{7}{5}, x = \frac{5}{5} = 1$$

ب

$$3x^2 - 10x + 7 = 0 \rightarrow x^2 - 10x + 21 = 0$$

$$(x - 7)(x - 3) = 0 \rightarrow x = \frac{7}{3}, x = \frac{3}{3} = 1$$

$$x^2 - 5x + 6 = 0 \rightarrow x^2 - 5x + 4 = 0 \rightarrow (x - 4)(x - 1) = 0$$

الف

$$x = \frac{4}{1}, x = \frac{1}{1} = 1$$

$$x^2 + 5x + 6 = 0 \rightarrow x^2 + 5x + 4 = 0 \rightarrow (x + 4)(x + 1) = 0$$

ب

$$x = \frac{-5}{1}, x = \frac{-4}{1} = -1$$

$$x^2 - 5x + 1 = 0 \rightarrow \Delta = 25 - 4 = 21 \rightarrow x = \frac{5 \pm \sqrt{21}}{2}$$

ج

$$5x^2 + 7x + 2 = 0 \rightarrow \Delta = 49 - 140 = -91 < 0 \rightarrow \text{لا يوجد حل}$$

$$x^2 - 3x - 2 = 0 \quad s = \frac{-b}{a} \quad p = \frac{c}{a}$$

$$s - 2p = (-3) - (-2) = -1 + 2 = 1$$

الف

$$s - 2p = (-3) - (-2) = -1 + 2 = 1$$

ب

$$\begin{pmatrix} 1 \\ 5 \end{pmatrix} + \begin{pmatrix} 4 \\ 2 \end{pmatrix} = 21 + 34 = 55$$

الف

$$\frac{1!}{5! \times 2!} = \frac{1 \times 2}{5} = \frac{2}{5}$$

$$\frac{4!}{2! \times 2!} = \frac{1 \times 4}{2} = 2$$

$$\begin{pmatrix} 4 \\ 1 \end{pmatrix} - \begin{pmatrix} 1 \\ 2 \end{pmatrix} = 14 - 21 = -7$$

ب

$$\frac{4!}{3! \times 1!} = \frac{1 \times 4 \times 3}{3} = 4$$

$$\frac{1!}{2! \times 1!} = \frac{1 \times 1}{2} = \frac{1}{2}$$

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