

الف)  $\left| \begin{matrix} -\frac{3}{2} \\ 1 \end{matrix} \right|$  ,  $\min$  (ب)

ext  $\left| \begin{matrix} \frac{b}{2a} \\ \frac{c}{a} \end{matrix} \right|$   $\left| \begin{matrix} -\frac{4}{2} = -2 \\ 3 \end{matrix} \right|$

الف)  $\left| \begin{matrix} 2 \\ 1 \end{matrix} \right|$  , (ب) در نقاط 1 و 3

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

ext  $\left| \begin{matrix} -\frac{b}{2a} \\ \frac{c}{a} \end{matrix} \right|$   $\left| \begin{matrix} -\frac{4}{-2} = 2 \\ 1 \end{matrix} \right|$

$-(x^2 - 4x + 3) = 0 \rightarrow \frac{x=1}{x=3}$

الف)  $a < \frac{9}{\lambda} \rightarrow a = 1$  (ب)  $a = \frac{9}{\lambda}$  (ج)  $a \geq \frac{9}{\lambda} \leftarrow a > \frac{9}{\lambda}$  (د)  $a = \frac{1}{p} \leftarrow a \leq \frac{9}{\lambda}$

$\Delta = b^2 - 4ac$   
 $\Delta = 9 - 4a$

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

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

الف)  $x^2 - 2x - 1 = 0$   $\Delta = 4 + 4 = 8$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{2 \pm \sqrt{8}}{2} \rightarrow \frac{2 + \sqrt{8}}{2} = \frac{2 + 2\sqrt{2}}{2} = 1 + \sqrt{2}$   
 $\frac{2 - \sqrt{8}}{2} = \frac{2 - 2\sqrt{2}}{2} = 1 - \sqrt{2}$

ب)  $x^2 + x - 4 = 0$   $\Delta = 1 + 16 = 17$

$x = \frac{-1 \pm \sqrt{17}}{2} = \frac{\sqrt{17} - 1}{2}$   
 $\frac{-\sqrt{17} - 1}{2}$

$$\text{الف) } x^2 - 11x + 28 = 0 \quad (x-4)(x-7) = 0 \quad \begin{matrix} x=4 \\ x=7 \end{matrix}$$

$$\text{ب) } x^2 + 3x - 28 = 0 \quad (x+7)(x-4) = 0 \quad \begin{matrix} x=-7 \\ x=4 \end{matrix}$$

$$\text{الف) } 5x^2 - 12x + 7 = 0 \rightarrow x^2 - 12x + 35 = 0 \quad (x-5)(x-7) = 0 \quad \begin{matrix} x=5 \\ x=7 \end{matrix}$$

$$\text{ب) } 3x^2 - 10x + 7 = 0 \rightarrow x^2 - 10x + 21 = 0 \quad (x-3)(x-7) = 0 \quad \begin{matrix} x=3 \\ x=7 \end{matrix}$$

$$\text{الف) } 2x^2 - 5x + 3 = 0 \quad (2x-3)(x-1) \Rightarrow x=1 \Rightarrow x=\frac{3}{2}$$

$$\text{ب) } 2x^2 + 5x + 3 = 0 \quad (2x+3)(x+1) \Rightarrow x=-1, x=-\frac{3}{2}$$

جواب: 28

$$\text{ج) } 2x^2 - 5x + 1 = 0 \quad \Delta = 25 - 4 = 17 \quad \frac{5 \pm \sqrt{17}}{4} \quad x = \frac{5 + \sqrt{17}}{4} \quad x = \frac{5 - \sqrt{17}}{4}$$

$$\text{د) } 4x^2 + 11x + 9 = 0 \quad \Delta = 121 - 144 = -23 \quad \text{جواب: ندارد}$$

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

$$S = + \rightarrow \frac{b}{a} = \frac{3}{1} = 3$$

$$P = x \rightarrow \frac{c}{a} = \frac{-2}{1} = -2 = P$$

$$\text{الف) } S^2 - 2P = 9 + 4 = 13$$

$$\text{ب) } S^3 - 3SP = 27 + 12 = 39$$

$$\text{الف) } \left| \frac{7}{5} \right| + \left| \frac{9}{7} \right| = \left| \frac{14}{5} \right|$$

$$\text{ب) } \left| \frac{9}{7} \right| - \left| \frac{1}{7} \right| = \left| \frac{8}{7} \right|$$