

ii) $x^2 - 4x + 9 = 1 \rightarrow (x-2)^2 = 1 \quad x-2 = \pm 1 \quad \begin{cases} x=3 \\ x=1 \end{cases}$

$\hookrightarrow x^T + 1x + 1y = 9 \rightarrow (x+y)^T = 9 \quad x+y = \pm 3 \quad \begin{cases} x = -1 \\ x = -4 \end{cases}$

$$\text{الف) } (x-3)(x-2)=0 \Rightarrow \begin{cases} x=2 \\ x=3 \end{cases}$$

$$\therefore (x-1)(x+2) = 0 \quad \begin{cases} x=1 \\ x=-2 \end{cases}$$

جواب نرارد $\rightarrow x = \frac{3 \pm \sqrt{9-20}}{2}$ چون دلتا منفی است.

$$b) \quad x = \frac{k \pm \sqrt{k^2 - k}}{k} \rightarrow x = \frac{k \pm \sqrt{k}}{k}$$

$$\text{الف) } (x-1)(x-2) = 0 \quad \begin{cases} x=1 \\ x=2 \end{cases}$$

$$\text{✓) } x^2 + x - 12 = 0 \rightarrow (x+4)(x-3) = 0 \quad \begin{cases} x = \frac{-1}{1} = -1 \\ x = \frac{12}{1} \end{cases}$$

$$\text{الف) } x^2 - 12x + 35 = 0 \rightarrow (x-5)(x-7) = 0 \quad \begin{cases} x = \frac{5}{5} = 1 \\ x = \frac{7}{5} \end{cases}$$

ج) $x^2 - 10x + 21 = 0$ $(x-3)(x-7) = 0$ $\begin{cases} x = \frac{10}{1} = 10 \\ x = \frac{21}{3} = 7 \end{cases}$

$$\text{الف) } x = \frac{-5 \pm \sqrt{25 - 12}}{-6} \rightarrow x = \frac{-5 \pm \sqrt{13}}{-6}$$

$$\text{ب) } x = \frac{1 \pm \sqrt{1 - 16 - 10}}{4} \quad \text{جواب ندارد چون دلتا منفی است.}$$

$$\text{ت) } x = \frac{1 \pm \sqrt{1 - 1}}{4} \quad \text{جواب ندارد}$$

$$\text{ث) } x = \frac{4 \pm \sqrt{16 - 16}}{4} \quad x = 1^*$$

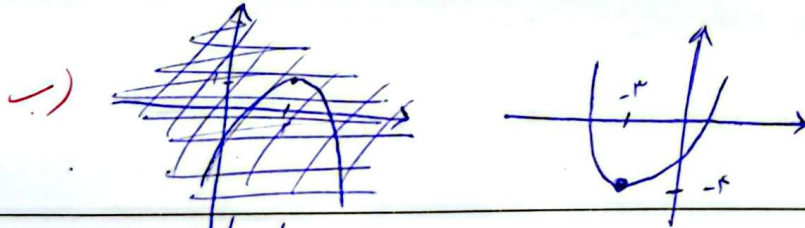
$$\text{الف) دلتا مثبت } x = \frac{3 \pm \sqrt{9 - 1a}}{4} \quad 9 - 1a > 0 \quad a < \frac{9}{1}$$

$$\text{ب) دلتا منفی } x = \frac{3 \pm \sqrt{9 - 1a}}{4} \quad 9 - 1a = 0 \quad a = \frac{9}{1}$$

$$\text{ج) دلتا منفی } x = \frac{3 \pm \sqrt{9 - 1a}}{4} \quad 9 - 1a < 0 \quad a > \frac{9}{1}$$

$$\text{د) } x = \frac{3 \pm \sqrt{9 - 1a}}{4} \quad 9 - 1a \geq 0 \quad a \leq \frac{9}{1}$$

$$\text{الف) } \text{ext} \left| \begin{array}{l} \frac{-b}{2a} = \frac{-6}{2} = -3 \\ (-3)^2 + 6(-3) + 5 = -4 \end{array} \right.$$



$$\text{الف) } \text{ext} \left| \begin{array}{l} \frac{-b}{2a} = \frac{-4}{2} = 2 \\ -(2)^2 + 4(2) - 3 = 1 \end{array} \right.$$



$$\text{الف) } (3)^2 - 2(-2) = 13$$

$$\text{ب) } (3)^3 - 3(3)(-2) = 45$$