

$y = x^2 + 4x + 5 \rightarrow m = \frac{-b}{2a} = \frac{-4}{2 \cdot 1} = -2$
 $\Delta = b^2 - 4ac = 16 - 20 = -4$
 $39 - 20 = 19$ (نشیب)

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$y = -x^2 + 6x - 3$
 $\Delta = b^2 - 4ac = 36 - 24 = 12$
 $m = \frac{-b}{2a} = \frac{-6}{-2} = 3$
 $y = \frac{c}{-a} = \frac{-3}{-1} = 3$ (بالسیر)

تفاضل نه سهمی مقدار را هم را قطع کردند
 $-x^2 + 6x - 3 < 0$
 محور فاصل صفر است
 $x = 1$
 $x < \frac{c}{a} = 3$

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$x^2 - 2x + a = 0$
 $\Delta = b^2 - 4ac = 4 - 4a$
 $4 - 4a > 0 \Rightarrow a < 1$
 $4 - 4a = 0 \Rightarrow a = 1$
 $4 - 4a < 0 \Rightarrow a > 1$
 $4 - 4a > 0 \Rightarrow a < 1$

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

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$\Delta = b^2 - 4ac = 4 - 4a$
 $x^2 - 2x - 1 = 0$
 $x = \frac{2 \pm \sqrt{4 + 4}}{2} = \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} = 1 \pm \sqrt{2} = x$
 $x^2 + x - 2 = 0$
 $x = \frac{-1 \pm \sqrt{1 + 8}}{2} = \frac{-1 \pm 3}{2} = 1$

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$$\text{الف) } x^2 - 11x + 28 =$$

$$(x-4)(x-7) \rightarrow \boxed{x=4, 7}$$

$$\text{ب) } x^2 + 3x - 28 =$$

$$(x+7)(x-4) \rightarrow \boxed{x=-7, 4}$$

$$\text{الف) } x^2 - 12x + 25 = 0 \rightarrow x^2 - 12x + 36 = 0$$

$$(x-6)(x-6) \rightarrow x = \frac{6}{1} = 6$$

$$\text{ب) } x^2 - 10x + 25 = x^2 - 10x + 25 = (x-5)(x-5) \rightarrow \boxed{x = \frac{5}{1} = 5}$$

$$\text{الف) } x^2 + 3x - 4 = 0 \Rightarrow x = 1, -4 \Rightarrow \boxed{x=1, -4}$$

$$\text{ب) } x^2 + 3x - 4 = 0 \Rightarrow x = -1, 4 \Rightarrow \boxed{x=-1, 4}$$

$$\text{ج) } \Delta = b^2 - 4ac = 9 - 4 = 5$$

$$\boxed{x = \frac{-b \pm \sqrt{\Delta}}{2a}}$$

$$\text{د) } \Delta < 0, \Delta = 49 - 144 \leftarrow \text{جواب ندارد زیرا}$$

$$\text{الف) } \left(\begin{matrix} 3 \\ 2 \end{matrix} \right) = \frac{-b}{a} \quad \text{ب) } \left(\begin{matrix} 3 \\ 2 \end{matrix} \right) = \frac{c}{a}$$

$$\text{الف) } \rightarrow 3^2 - 2(-2) = 9 + 4 = \boxed{13}$$

$$\text{ب) } \rightarrow 3^2 - 2(2)(-2) = 9 + 8 = \boxed{17}$$

$$\text{الف) } \left(\begin{matrix} 3 \\ 2 \end{matrix} \right) + \left(\begin{matrix} 9 \\ 2 \end{matrix} \right) = \frac{3 \times 9}{2} + \frac{9 \times 3}{2} = 13.5 + 13.5 = \boxed{27}$$

$$\text{ب) } \left(\begin{matrix} 9 \\ 2 \end{matrix} \right) \cdot \left(\begin{matrix} 1 \\ 2 \end{matrix} \right) = \frac{9 \times 1}{2 \times 2} = 2.25, \frac{9 \times 2}{2} = 9$$

$$2.25 - 9 = \boxed{-6.75}$$