

$$\text{ext} \int \frac{-b}{2a} \Rightarrow \frac{-4}{2} = -2 \xrightarrow{\text{جایگزینی}} y = x^2 + 4x + 5 \Rightarrow 9 + (-18) + 5 \Rightarrow -4$$

$$\frac{-\Delta}{2a} \Rightarrow \frac{-4}{2} = -2$$

$$\frac{(n+2)(n+3)}{n = -2, -3} \rightarrow \text{مقطع مورد نیاز}$$

$$U \leftarrow \text{Min} \quad + \leftarrow x^2$$

$$y = -x^2 + 2x - 3 \Rightarrow$$

$$\rightarrow \text{MOX} \rightarrow \cap$$

$$\text{ext} \int \frac{-b}{2a} \Rightarrow \frac{-2}{-2} = 1$$

$$\frac{-\Delta}{2a} \Rightarrow 1$$

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

$$\Delta = 4 - 4(-3) = 16 \Rightarrow \sqrt{16} = 4$$

$$\frac{-2 \pm 4}{-2} \Rightarrow \frac{-2+4}{-2} = -1 \quad \frac{-2-4}{-2} = 3$$

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

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

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

$$2x^2 - 3x + a = 0 \Rightarrow a < 1, \Delta < 0 \Rightarrow a < \frac{9}{4} \leftarrow 1a < 4 \leftarrow 0 < 4 - 1a \leftarrow 0 < \Delta \leftarrow \text{الف}$$

$$1, \Delta = a \leftarrow \frac{9}{4} = a \leftarrow 9 = 1a \leftarrow 4 - 1a = 0 \leftarrow 0 = \Delta \leftarrow \text{ب}$$

$$1, \Delta < a \leftarrow \frac{9}{4} < a \leftarrow 9 < 1a \leftarrow 4 - 1a < 0 \leftarrow \Delta > 0 \leftarrow \text{ج}$$

$$a < 1, \Delta \leftarrow a < \frac{9}{4} \leftarrow 1a < 4 \leftarrow 0 < 4 - 1a \leftarrow 0 < \Delta \leftarrow \text{د}$$

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

$$\text{ب) } x^2 + x - 2 + \frac{1}{x} = \frac{14}{x} \Rightarrow x^2 + x + \frac{1}{x} = \frac{14}{x} \Rightarrow (x + \frac{1}{x})^2 = \frac{14}{x} \Rightarrow x + \frac{1}{x} = \pm\sqrt{\frac{14}{x}} \Rightarrow x = \pm\sqrt{\frac{14}{x}} - \frac{1}{x}$$

$$\text{الف} \Rightarrow x^2 - 2x - 1 \Rightarrow \Delta = 4 - (-4) = 8 \Rightarrow \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} \Rightarrow \frac{2(1 \pm \sqrt{2})}{2} = 1 \pm \sqrt{2}$$

$$\text{ب} \Rightarrow x^2 + x - 2 = 1 - (-14) = 14 \Rightarrow \frac{-1 \pm \sqrt{17}}{2}$$

الف $x = 4, 7 \Rightarrow (x-4)(x-7) = 0$

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

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

ب $x^2 - 10x + 21 = 0 \Rightarrow (x-3)(x-7) \Rightarrow x = 3, 7$

① ضرب ضرب x^2 به عبارت آخر (C) تبدیل کردن به جمله مشترک (D) تقسیم ریشه ها برضرب ضرب شده

الف $x^2 - 5x + 4 = 0 \Rightarrow (x-1)(x-4) \Rightarrow x = 1, 4$

ب $x^2 + 5x + 4 = 0 \Rightarrow (x+1)(x+4) \Rightarrow x = -1, -4$

ج $\Delta = 40 - 16 = 24 \Rightarrow \frac{5 \pm \sqrt{144}}{2}$

د $x^2 + 7x + 34 = 0 \Rightarrow \Delta = 49 - (34 \times 4) = -47$ ریشه ندارد زیرا Δ منفی است

الف $x^2 - 3x - 2 = 0 \Rightarrow \Delta = 9 - (-8) = 17 \Rightarrow \frac{3 \pm \sqrt{17}}{2}$
 ب $x^2 - 3x + 2 = 0 \Rightarrow \Delta = 9 - 8 = 1 \Rightarrow \frac{3 \pm 1}{2} \Rightarrow x = 2, 1$

الف $9 - (x \times x) = 13 \Rightarrow 9 - x^2 = 13 \Rightarrow x^2 = -4$

ب $27 - (-18) = 45$

الف $\frac{1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10 \times 11 \times 12 \times 13 \times 14 \times 15 \times 16 \times 17 \times 18 \times 19 \times 20}{1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10 \times 11 \times 12 \times 13 \times 14 \times 15 \times 16 \times 17 \times 18 \times 19 \times 20} = 1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

ب $\frac{1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10 \times 11 \times 12 \times 13 \times 14 \times 15 \times 16 \times 17 \times 18 \times 19 \times 20}{1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10 \times 11 \times 12 \times 13 \times 14 \times 15 \times 16 \times 17 \times 18 \times 19 \times 20} = 1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$