

Ent $\begin{cases} \frac{-b}{ra} \rightarrow \frac{-y}{r} z = -w \\ \frac{-d}{ra} = \frac{-14}{r} = -r \end{cases} \rightarrow \begin{bmatrix} -14 \\ -r \end{bmatrix}, \min \text{ (in)} \quad \uparrow \downarrow \quad (y)$



$0 = -x^2 + 4x - 4$ ✓
 $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-4 \pm \sqrt{16 - 16}}{2(-1)} = \frac{-4 \pm 0}{-2} = 2$

$b^2 - 4ac > 0 \iff 2/6 + 26 \Delta r$ الجزء

$$\frac{9}{11} > \alpha$$

①

f

(11)

(2)

$$-b \pm \sqrt{\Delta} \quad \Delta = b^2 - 4ac \rightarrow 1 + 19 = 20$$

$$x = \frac{-1 \pm \sqrt{14}}{1}$$

$$\text{الف) } (x-7)(x-4) = 0 \rightarrow \begin{cases} x=7 \\ x=4 \end{cases} \checkmark$$

2

$$\text{ب) } (x+7)(x-4) = 0 \rightarrow \begin{cases} x=-7 \\ x=4 \end{cases} \checkmark$$

6

$$\text{الف) } 5x^2 - 12x + 7 = 0 \rightarrow x^2 - 12x + 35 = 0 \rightarrow (x-7)(x-5) = 0 \rightarrow \begin{cases} x=7 \\ x=5 \end{cases} \rightarrow \begin{cases} x_1 = \frac{7}{5} \\ x_2 = \frac{5}{5} = 1 \end{cases} \checkmark$$

2

7

$$\text{ب) } 3x^2 - 10x + 7 = 0 \rightarrow x^2 - 10x + 21 = 0 \rightarrow (x-7)(x-3) = 0 \rightarrow \begin{cases} x=7 \\ x=3 \end{cases} \rightarrow \begin{cases} x_1 = \frac{7}{3} \\ x_2 = \frac{3}{3} = 1 \end{cases} \checkmark$$

$$\text{الف) } \text{جمع فrazيب مفر است} \rightarrow \begin{cases} 1 \\ \frac{c}{a} = \frac{10}{2} \end{cases} \checkmark$$

$$\text{ب) } a+c=3 \rightarrow \begin{cases} -1 \\ -\frac{c}{a} = -\frac{10}{2} \end{cases} \checkmark$$

2

8

$$\text{ج) } \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \frac{a \pm \sqrt{14}}{2} \checkmark$$

$$\text{د) } \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \text{نقد حقیقی ندارد} \rightarrow \Delta = b^2 - 4ac \rightarrow 49 - 144 = -95$$

$$\Delta = (-5)^2 - 4 \cdot 1 \cdot 1 = 1$$

$$\text{الف) } \left(\frac{10}{1}\right)^2 - 2\left(\frac{-2}{1}\right) = 13 \checkmark$$

$$S = \frac{-b}{a}$$

$$P = \frac{c}{a}$$

9

$$\text{ب) } \left(\frac{10}{1}\right)^2 - 2\left(\frac{10}{1}\right)\left(\frac{-2}{1}\right) = 13 \checkmark$$

$$\text{الف) } \binom{5}{5} = \binom{5}{4} + \binom{5}{3} \rightarrow \frac{5 \times 4}{2} + \frac{5 \times 1}{1} = 11 + 5 = 16 \checkmark$$

2

10

$$\text{ب) } \binom{9}{10} - \binom{1}{1} = \frac{9 \times 8 \times 7 \times 6 \times 5}{1 \times 2 \times 3 \times 4 \times 5} - \frac{1 \times 1}{1} = 126 - 1 = 125 \checkmark$$