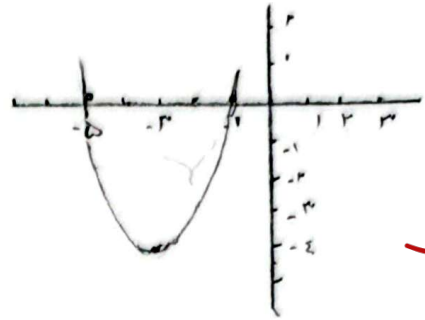


الف) $\text{ent} \left| \frac{-b}{2a} \rightarrow -\frac{2}{2} = -1 \right.$
 $-f$
 $a > 0 \Rightarrow \min$

ب) $a+b=c$
 $-1+5=4$
 $-\frac{c}{a}$



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الف) $\text{ent} \left| \frac{-f}{1} = +2 \right.$

ب) $a+b+c=0$ ✓
 $1+9+3=13$ ✓



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

الف) $\Delta > 0 \quad 9 - 4a > 0 \rightarrow \frac{9}{4} > a$

ب) $\Delta = 0 \quad 9 - 4a = 0 \rightarrow a = \frac{9}{4}$

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ج) $\Delta < 0 \quad 9 - 4a < 0 \rightarrow \frac{9}{4} < a$

د) $\Delta \geq 0 \quad 9 - 4a \geq 0 \rightarrow a \leq \frac{9}{4}$

الف) $x^2 - 2x + 1 = 2 \rightarrow (x-1)^2 = 2 \rightarrow x-1 = \pm\sqrt{2} \Rightarrow \begin{cases} x=1+\sqrt{2} \\ x=1-\sqrt{2} \end{cases}$

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

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$\Delta = b^2 - 4ac$

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

الف) $\Delta = 4 + 4 = 8$

$x = \frac{2 \pm \sqrt{8}}{2}$

$\rightarrow \begin{cases} x = \frac{2+\sqrt{8}}{2} = 1+\sqrt{2} \\ x = \frac{2-\sqrt{8}}{2} = 1-\sqrt{2} \end{cases}$

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ب) $\Delta = 1 + 12 = 13$

$x = \frac{-1 \pm \sqrt{13}}{2}$

$\rightarrow \begin{cases} x = \frac{-1+\sqrt{13}}{2} \\ x = \frac{-1-\sqrt{13}}{2} \end{cases}$

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

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

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

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$$\text{ب) } n^2 - 10n + 21 = 0 \Rightarrow (n-7)(n-3) \Rightarrow \begin{cases} n = \frac{7}{7} \\ n = \frac{3}{1} = 3 \end{cases}$$

$$\text{الف) } a+b+c=0 \Rightarrow \begin{cases} n=1 \\ n = \frac{3}{4} \end{cases}$$

$$\text{ب) } a+c=b \Rightarrow \begin{cases} -1 \\ -\frac{3}{4} \end{cases}$$

$$\text{ج) } 25-1=14 \quad n = \frac{5 \pm \sqrt{14}}{1} \rightarrow \begin{cases} n = \frac{5+\sqrt{14}}{1} \\ n = \frac{5-\sqrt{14}}{1} \end{cases}$$

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$$\Delta = 49 - 144 = -95 \quad \Delta < 0 \rightarrow \text{جواب ندارد}$$

$$q = -\frac{b}{a} = 3 \quad p = \frac{c}{a} = -2$$

$$\text{الف) } 9 + 4 = 13$$

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$$\text{ب) } 27 + 18 = 45$$

$$\text{الف) } 21 + 36 = 57$$

$$\binom{7}{5} = \frac{7!}{5! \times 2!} = \frac{7 \times 6}{2} = 21$$

$$\binom{9}{7} = \frac{9!}{7! \times 2!} = \frac{9 \times 8}{2} = 36$$

$$\binom{9}{7} = \frac{9!}{7! \times 2!} = \frac{9 \times 8}{2} = 36$$

$$\text{ب) } 14 - 28 = -14$$

$$\binom{14}{7} = \frac{14!}{7! \times 7!} = \frac{14 \times 13 \times 12 \times 11 \times 10 \times 9 \times 8}{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2} = 3432$$

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