

الف) $2m^2 - 4m + 1 = y$ ext $\left\{ \begin{array}{l} \frac{-b}{2a} \rightarrow \frac{4}{4} = 1 \\ \frac{-\Delta}{2a} \rightarrow \frac{-1}{2} = -1 \end{array} \right\} \xrightarrow{\Delta \gamma_0} \min$ (1)

ب) $-2m^2 + 4m - 1 = y$ ext $\left\{ \begin{array}{l} \frac{-b}{2a} \rightarrow \frac{-4}{-4} = 1 \\ \frac{-\Delta}{2a} \rightarrow \frac{-1}{-2} = 0.5 \end{array} \right\} \xrightarrow{\Delta \gamma_0} \max$

الف) $y = a^2 - 4a + 1$ ext $\left\{ \begin{array}{l} \frac{y}{a} = 3 \\ \frac{4a}{-4} = -1 \end{array} \right\} \xrightarrow{\Delta \gamma_0} \min$ (2)

ب) $-a^2 + 4a + 1 = y$ ext $\left\{ \begin{array}{l} \frac{-4}{-2} = 2 \\ \frac{12}{4} = 3 \end{array} \right\} \xrightarrow{\Delta \gamma_0} \max$

ببینید یک بار!
 عرض از مبدأ 1 هست

$\alpha + \beta = 1 \rightarrow \alpha = 1 - \beta$
 $\alpha\beta = -2 \rightarrow (1 - \beta)\beta = \beta - \beta^2 = -2 \rightarrow \beta^2 - \beta - 2 = 0 \rightarrow \begin{cases} \beta = -1 \rightarrow \alpha = 2 \\ \beta = 2 \rightarrow \alpha = -1 \end{cases}$ (3)

$4(-1) + k - 9(1) - 2 = 0 \rightarrow 3 + k = 0 \rightarrow k = -3$
 $4(1) + 4k - 11 - 2 = 0 \rightarrow 4k = -1 \rightarrow k = -\frac{1}{4}$

سوال در هر حالت α و β 1 و -1 هست.

$\sqrt{\alpha} - \sqrt{\beta} = 1 \xrightarrow{\text{مربع}} \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \rightarrow 2m - 2\sqrt{m} = 1 \rightarrow 2m - 1 = 2\sqrt{m}$ (4)

$\xrightarrow{\text{مربع}} 4m^2 - 4m + 1 = 4m \rightarrow 4m^2 - 8m + 1 = 0 \rightarrow (m-1)(4m-1) = 0$

$m = \begin{cases} 1 \\ \frac{1}{4} \end{cases}$

$m = 1 \rightarrow m^2 - 2m + 1 = 0 \rightarrow \Delta \gamma_0 \checkmark \rightarrow m = 1$
 $m = \frac{1}{4} \rightarrow m^2 - \frac{1}{2}m + \frac{1}{4} = 0 \rightarrow \Delta \gamma_0 \times$

$a^2 - a - 2 = 0 \rightarrow (a-2)(a+1) = 0 \rightarrow a = \begin{cases} 2 \\ -1 \end{cases}$ جواب اول $-\frac{1}{2}$

$S_2 \xrightarrow{\text{مربع}} \frac{\Delta}{4a^2} = \frac{\Delta}{4a^2} = \frac{\Delta(m-1)^2}{4} = \frac{|m-1|}{2}$ (5)

$\frac{|m-1|(m)}{2} \times \frac{1}{2} = \frac{3}{2} \rightarrow m(m-1) = 3 \rightarrow m^2 - m - 3 = 0 \rightarrow m = \begin{cases} 2 \\ -1 \end{cases}$

$y = m^2 - 2m + 1 \rightarrow \frac{-b}{2a} = \frac{-2}{2} = -1$
 $\frac{m}{2} = -1 \rightarrow m = -2$
 $\frac{m}{2} = \frac{3}{2} \rightarrow m = 3$

جواب $-\frac{1}{2}, 1, \frac{3}{2}$

Should be $a \neq 0$ $\frac{-\Delta}{\Delta a} = \frac{V}{\Delta} \rightarrow \frac{9 - 4a^2}{-4a} = \frac{V}{\Delta} \rightarrow 32a^2 - 12a + 4V = 0$ (9)

$\rightarrow 12a^2 + 4a + 11 = 0 \rightarrow a^2 - Va + 11 = 0 \rightarrow (a-14)(a+9)$ $\left\{ \begin{array}{l} a=14 \checkmark a \neq 0 \\ a=-9 \times a \neq 0 \end{array} \right.$

$\frac{\sqrt{\Delta}}{|a|} = 2 \rightarrow \sqrt{\Delta} = 2 \rightarrow \Delta = 4 \rightarrow a^2 + 1 + 4a - 4a = 4 \rightarrow a^2 - 4a - 4 = 0$ (V)

$\rightarrow (a-4)(a+1) = 0 \rightarrow a = -1 \times$ $\left\{ \begin{array}{l} a=4 \checkmark \\ a=-1 \times \end{array} \right.$ $12a^2 - 4a + 11 = 9$

$a^2 - (1.0)a + b = 0 \rightarrow \frac{\sqrt{\Delta}}{|a|} = 2 \rightarrow \sqrt{\Delta} = 2 \rightarrow \Delta = 4 \rightarrow 1.0 - 4b = 4 \rightarrow 4 = 4b \rightarrow b = 1$

$P_{\text{محل}} = 1 \quad P_{\text{محل}} = 1$ $(4 - 1 = 3)$

مثلاً $\left| \begin{array}{c} -a \\ -4a \\ \frac{a+1}{4} \end{array} \right| = \frac{1}{4}$ $\left| \begin{array}{c} 1 \\ -b+1 \\ \frac{1}{4} \end{array} \right|$ $\frac{a+1}{4} = 4b \left(\frac{1}{4}\right) - b \left(\frac{1}{4}\right) - 1$ (1)

$\rightarrow \frac{a+1}{4} = \frac{b}{4} - \frac{b}{4} - 1 \rightarrow a+1 = -4$

$\rightarrow a = -5$ $(-9 - (-5) = 4)$

$y = 12a^2 - 4a + 11$

$\frac{-(b+1)}{4} = 12 \left(\frac{1}{4}\right) - 12 \left(\frac{1}{4}\right) + 11 = \frac{12}{4} - \frac{12}{4} + 11 = -\frac{1}{4} \rightarrow \frac{b+1}{4} = \frac{1}{4} \rightarrow b = 0$

$\alpha\beta = \frac{\beta}{4\alpha} \rightarrow 4\alpha^2 = 1 \rightarrow \alpha = \pm \frac{1}{2}$ $\alpha + \beta = \frac{-4}{4\alpha} \rightarrow -\frac{1}{2} + \beta = \frac{-4}{-2}$ (9)

$\alpha = -\frac{1}{2}$ $\beta = 1$ $\alpha = -\frac{1}{2}$ $\left\{ \begin{array}{l} \frac{-4}{-2} = \frac{4}{2} \\ \frac{12}{-2} = \frac{12}{2} \end{array} \right.$ (محل)

$a+b = a^2 + b^2 - 12$ $ab = a+b+1 \rightarrow a+b = S = S^2 - 4P - 12$ (1)

$S = S^2 - 4(S+1) - 12 = S^2 - 4S + 4 - 12 \rightarrow S = S^2 - 4S + 4 - 12 \rightarrow S^2 - 5S - 10 = 0$

$\rightarrow S = -2 \times$ $S = 7 \checkmark$

$(a+b = 7)$