کاران جادسی نژاد — یازدهم تجربی سری B

1)

$x_S = 2$

$\frac{-1}{2(a-1)} = 2 \to a = \frac{3}{4}$ $\quad \frac{-x^2}{4} + x + 3 = 0 \to x = \begin{cases} 6 \checkmark \\ -2 \times \text{ غیر قابل قبول} \end{cases}$

2)

طبق تعیین علامت $\xrightarrow{\text{شکل صورت سوال}}$ 

$\begin{cases} a < 0 \to m < 0 \quad I \\ \Delta > 0 \to 25 - 4m^2 > 0 \to -\frac{5}{2} < m < \frac{5}{2} \quad II \end{cases}$ $\quad (I) \cap (II) \to (-\frac{5}{2}, 0)$

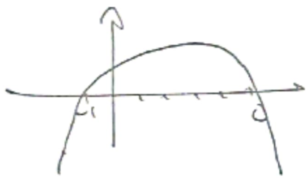
3)

$S = \frac{3-\sqrt{5}}{3} + \frac{3+\sqrt{5}}{3} = \boxed{2}$ $\quad P = \frac{3-\sqrt{5}}{3} \times \frac{3+\sqrt{5}}{3} = \frac{4}{9}$

$x^2 - Sx + P \to x^2 - 2x + \frac{4}{9} \xrightarrow{\times 9} \boxed{9x^2 - 18x + 4}$

5)

$\begin{cases} y = a(x-2)^2 + 9 \\ 4a + 9 = 5 \to \boxed{a = -1} \end{cases} \to \boxed{-x^2 + 4x + 5 \begin{cases} -1 \\ 5 \end{cases}}$



6)

$\frac{1}{\alpha} + \frac{1}{\beta} \xrightarrow{\text{جمع کسرها}} \frac{\alpha+\beta}{\alpha\beta} \to \frac{S}{P}$

$S = \frac{7}{\alpha} \begin{cases} \alpha = 3 \to \boxed{\beta = \frac{2}{3}} \\ \alpha = -3 \to \beta = -\frac{2}{3} \times \text{ غیر قابل قبول!} \end{cases}$ $\quad P = \frac{9\beta}{\alpha} \to \alpha^2 = 9 \to \alpha \begin{cases} 3 \\ -3 \end{cases} \times \Delta < 0$

$\frac{S}{P} = \frac{\frac{-7}{3}}{\frac{-2}{1}} = \boxed{\frac{7}{6}}$

7)

$\alpha + \beta = -m$

$\alpha\beta = -2m \nearrow \alpha^2 = 2m - \alpha m \quad 2m - m\alpha - m\beta = 8 \to \Delta > 0 \to \frac{-8 \quad 2}{+ \ | \ - \ | \ +}$

$\beta = \frac{-2m}{\alpha} \to m^2 + 2m - 8 \to (m-2)(m+4) \begin{cases} \textcircled{2 \checkmark} \quad 2m - m(-m) = 8 \\ -4 \times \end{cases} \quad \boxed{\alpha + \beta = -(2) = -2}$

$y_S = -\frac{\Delta}{4a} \to \frac{-16 + 4m(7 + \frac{m}{2})}{4m} = 8 \to$ $m = 6$ ✗ ، $\boxed{m = -2}$ ✓

$y = -2x^2 + 4x + 6 = 0 \to$ -1 ✗ ، $\boxed{3}$ ✓

$y = a(x-2)^2 + 4 \xrightarrow[a]{\text{بدست آوردن}} y = -\frac{x^2}{2} + 2x + 2$

$\frac{1}{\alpha} + \frac{1}{\beta} \Rightarrow \frac{\alpha+\beta}{\alpha\beta} \to \frac{S}{P} \to \frac{4}{-8} \boxed{= -\frac{1}{2}}$

جایگذاری ۲ $\to 4 - 8a - 8 + 3a^2 + 6a + 3 \Rightarrow 3a^2 - 2a - 1 = 0 \to$ 1 ✓ ، $-\frac{1}{3}$ ✗

$a = 1 \to x^2 - 8x + 12 \to$ 2 ، $\boxed{6}$

$a = -\frac{1}{3} \to 3x^2 - 8x + 4 \to$ 2 ، $\boxed{\frac{2}{3}}$

ریشه‌ها $= 2 , 6 , \frac{2}{3}$