پرهام منفردی

یازدهم تجربی B

۱-

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

$\frac{-\Delta}{4a} = 7$

$\frac{b^2 + 12}{12} = 7 \qquad b^2 + 12 = 28$

$b^2 = 16$

$b = \pm 4$

۲-

$\Delta < 0$ ← جواب ندارد

$f(x) = x^4 + 2x^2 + 3 \xrightarrow{x^2 = t} t^2 + 2t + 3 = 0 \qquad 4 - 12 < 0$

$f(x) = (4 - x^2)^2 - 2(4 - x^2) - 15 \xrightarrow{(4-x^2) = t} t^2 - 2t - 15 = 0$

$\frac{2 \pm \sqrt{4 + 60}}{2}$ → 5 , -3

$4 - x^2 = 5$ ؛ $x^2 = -1$ غ ق ق

$4 - x^2 = -3 \qquad x^2 = 7$

$x = \pm\sqrt{7}$

۳-

$4x^2 - 16x + m = 0$

$\alpha , \alpha + 2 \Rightarrow 2\alpha + 2 = \frac{16}{4}$

$2\alpha + 2 = 4$

$2\alpha = 2$

$\alpha = 1$

$1 , 3$

$m = 12$

$(x-1)(x-3)$

$4(x^2 - 4x + 3)$

$4x^2 - 16x + 12$

۴-

$3x^2 - 6x + m - 1 = 0$

$\frac{6}{3} = 2$

$\begin{cases} 2\alpha - \beta = 4 \\ \alpha + \beta = 2 \end{cases}$

$3\alpha = 6 \Rightarrow \alpha = 2 \qquad \beta = 0$

$3(x(x-2)) = 3x^2 - 6x$

$m = 1$

۵-

$-mx^2 + 4x + m^2 - 2 = 0$

$\alpha , \frac{1}{\alpha} \qquad \alpha \times \frac{1}{\alpha} = 1 \qquad \frac{m^2 - 2}{-m} = 1$

$m^2 + m - 2 = 0$

1 ق ق ، -2 غ ق ق

$\Delta > 0$

$4m^2 - 4m + 16 > 0$

$m^2 - m + 4 > 0$

۶-

$x^2 - mx + 3 = 0$

$\alpha\beta^2 = 4 \qquad \alpha\beta = 3$

$\alpha\beta(\beta) = 4 \Rightarrow \beta = \frac{4}{3}$

$\alpha \cdot \frac{4}{3} = 3$

$\alpha = \frac{9}{4}$

$\frac{9}{4} + \frac{4}{3} = m$

$\frac{27 + 16}{12} = \frac{43}{12}$

۷-

$x^2-4x+m=0$

$3\alpha , \alpha$

$\frac{-(-4)}{1}=4$

$3\alpha+\alpha=4\alpha$

$4\alpha=4 \quad \alpha=1$

$\alpha \times 3\alpha = 3\alpha^2 = 3$

$m=3$

۸-

$x^2-7x+2=0$

$\alpha^3+\frac{8}{\alpha^3}$

$\alpha\beta=2$

$\beta=\frac{2}{\alpha} \xRightarrow{\text{به توان ۳}} \beta^3=\frac{8}{\alpha^3}$

$\alpha^3+\beta^3$

S^3-3SP

$343-42=301$

۹-

$h(t)=-10t^2+50t$

$\frac{-2500}{-40}=\frac{250}{4}=62.5$

$-10t^2+50t=0$

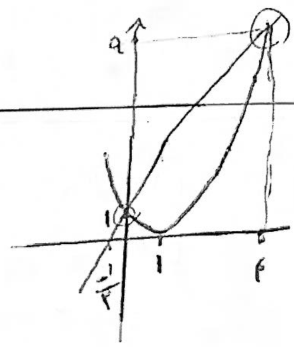
$-t^2+5t=0$

$t(-t+5)=0$

$t=0$ غ ق ق

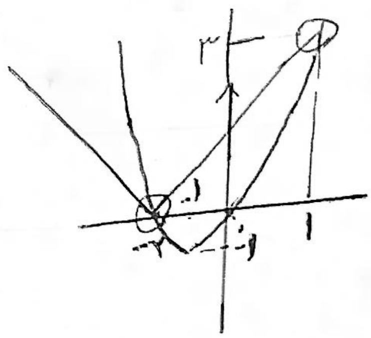
5

$t=5$



۱۰-

$(x-1)^2=2x+1$



$x^2+2x=|x+2|$