

Subject:

Year:

Month:

Day:

$$y = -n^2 + bn + c$$

سوال ۱

$$S_{max} = 7 \rightarrow -\frac{\Delta}{2a} = 7 \rightarrow -\Delta = 14 \rightarrow b^2 - 4(-1)(c) = 14 \rightarrow b^2 = 14 \rightarrow b = \pm \sqrt{14}$$

5

$$f(x) = x^2 + 2x + 3 \rightarrow x^2 + 2x + 3 = 0$$

سوال ۲

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

5

$$(x^2 - 1)^2 - 2(x^2 - 1) - 1 = 0 \rightarrow (x^2 - 1)(x^2 - 3) = 0$$

$$x^2 - 1 = 0 \rightarrow x^2 = 1 \rightarrow x = \pm 1$$

$$x^2 - 3 = 0 \rightarrow x^2 = 3 \rightarrow x = \pm \sqrt{3}$$

$$5n^2 - 14n + m = 0$$

سوال ۳

$$\alpha + \alpha + 2 = \frac{14}{5} \rightarrow 2\alpha + 2 = \frac{14}{5} \rightarrow \alpha = 1 \rightarrow \alpha + 2 = 3$$

1, 10

$$\frac{c}{f} = 13 \rightarrow m = 12 \rightarrow 5n^2 - 14n + 12 = 0$$

$$5n^2 - 14n + 12 = 0$$

$$n^2 - 5n + 12 = 0 \rightarrow (n-3)(n-4) = 0 \rightarrow n = 3, 4$$

$$5n^2 - 14n + m - 1 = 0 \rightarrow 2\alpha - \beta = 5$$

سوال ۴

$$\alpha + \beta = 2 \rightarrow \alpha = \frac{5 + \beta}{2}$$

1, 10

$$\left(\frac{5 + \beta}{2} + \beta \right) = 2 \rightarrow 5 + 3\beta = 4 \rightarrow \beta = -\frac{1}{3} \rightarrow \alpha = \frac{11}{6}$$

$$\frac{m-1}{2} = 0 \rightarrow m-1 = 0 \rightarrow m = 1$$

$$5n^2 - 14n + m = 0$$

$$-m x^2 + 5x + m^2 - 2 = 0$$

سوال ۵

$$\frac{m^2 - 2}{-m} \geq 1 \rightarrow m^2 - 2 \geq -m \rightarrow m^2 + m - 2 = 0 \rightarrow (m+2)(m-1) = 0$$

5

$$\Delta \geq 0 \rightarrow 14 - 4(-m)(m^2 - 2) \geq 0$$

$$m = -2 \rightarrow m = 1$$

$$Arman \quad 14 + 4m(m^2 - 2) \geq 0 \rightarrow m^3 - 2m + 14 \geq 0 \rightarrow m = 1 \rightarrow 1 - 2 + 14 \geq 0 \rightarrow 13 \geq 0 \rightarrow \checkmark$$

$$m = -2 \rightarrow -1 + 4 + 14 \geq 0 \rightarrow 17 \geq 0 \rightarrow \checkmark$$

$\alpha\beta = r \rightarrow \alpha\beta = r \rightarrow \alpha = \frac{r}{\beta}, \beta = \frac{r}{\alpha} \rightarrow m = \frac{r}{\alpha}$

20 (4)

$X^2 - EX + M = 0$

$2x^2 - \frac{r}{15}x + r = 0$

سوال 17

$\alpha \sim \beta \alpha \rightarrow \alpha + \beta = E\alpha = +r$

$2x^2 - rx + r = 0$

$\alpha = r$

$\alpha = 1 \rightarrow \alpha = 1 \beta = r$

$\frac{r}{\alpha} = \frac{M}{1} = \alpha\beta = r \times 1 \Rightarrow M = r$

17/50

$X^2 - VX + r = 0$

$\alpha^2 + \frac{1}{\alpha} \rightarrow (\alpha + \frac{r}{\alpha})(\alpha + \frac{r}{\alpha} = r)$

سوال 18

$\alpha\beta = r \rightarrow \beta = \frac{r}{\alpha}$

$\alpha^2 + \frac{r}{\alpha} = (\alpha + \frac{r}{\alpha})^2 - r$

$\alpha + \frac{r}{\alpha} = +V$

$(V) \left((V)^2 - r - r \right) = 401$

5

$h(t) = -10t^2 + \omega_0 t$

$-\frac{b}{2a} = \frac{-\omega_0}{-10 \times 2} = \frac{\omega_0}{20}$

سوال 9

$h_{max} = -10 \left(\frac{\omega_0}{20} \right)^2 + \omega_0 \times \frac{\omega_0}{20} = \frac{\omega_0^2}{20}$

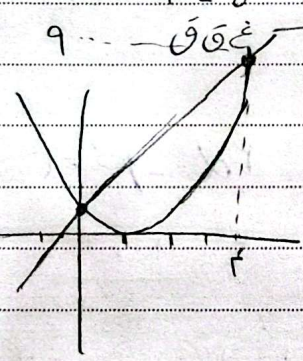
5

$0 = -10t^2 + \omega_0 t \rightarrow -10t(t - \omega_0) = 0$

$t = 0 \quad t = \omega_0 \checkmark$

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

$x = -\frac{1}{2}$
 $x = 0 \rightarrow y = 1$
 $x = 1 \rightarrow y = 0$
 $x = 2 \rightarrow y = 1$
 $x = 3 \rightarrow y = 0$



دو محور = 2 ریشه

$x = 0 \quad y = 1$

$x = 1 \quad y = 0$

سوال 10

5

$x + 2x = 1 \rightarrow x + 2 = 1$

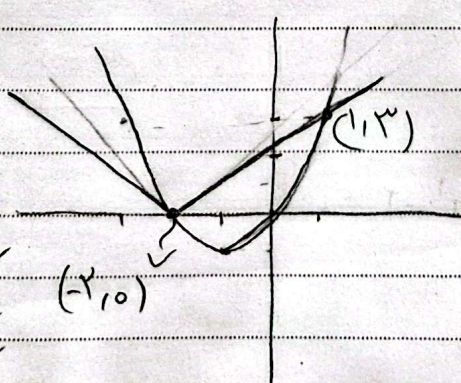
$-\frac{b}{2a} = \frac{-r}{2} = -1 \rightarrow y = 1 - r$

$x^2 - 2x + 2 = x + 2$

$x^2 - 3x = 0 \rightarrow x(x - 3) = 0 \rightarrow x = 0 \quad x = 3$

$x^2 - 2x + 2 = 0 \rightarrow x = 1 \pm i$

$x^2 - 2x = -1 \rightarrow x = 1 \pm i$



دو محور = 2 ریشه