

ساده ترین مسئله تعریف شماره ۱۴ باز در دفتر

$$y = -a^2 + ba + c \quad b^2 + 12 \quad (1)$$

$$y = 7 \rightarrow -\Delta = 7 \quad \Delta(b^2 - 4(-1)(c)) = 7$$

$$b^2 + 12 = 16 \rightarrow b^2 = 4 \rightarrow b = \pm 2$$

$$\text{الف) } f(a) = a^2 + 2a + 3 \quad a^2 = 4$$

$$a^2 + 2a + 3 = (a+1)(a+3)$$

$$a - a^2 = 4$$

$$\text{ب) } f(a) = (4 - a^2)^2 - 2(4 - a^2) - 15$$

$$a^2 - 2a - 15 = 0 \rightarrow (a-5)(a+3) = 0$$

$$a - a^2 = 4 \rightarrow a^2 = -a - 4 \quad a = 5 \rightarrow a = -3$$

$$4 - a^2 = -3 \rightarrow a^2 = 7 \rightarrow a = \pm \sqrt{7}$$

$$4a^2 - 12a + m = 0 \quad \alpha \text{ و } \alpha + 2$$

$$P = \alpha^2 (\alpha + 2) = 1 \times 3 = 3 = \frac{m}{4} \rightarrow m = 12 \quad 4a^2 - 12a + 12 = 0 \quad \Delta = 0 \checkmark$$

$$S = \alpha + \alpha + 2 = 2\alpha + 2 = 4 = 6 \rightarrow 2\alpha = 4 \rightarrow \alpha = 2$$

$$4a^2 - 4a + m - 1 = 0$$

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

$$S = \alpha + \beta = \frac{4}{4} = 2$$

$$P = \alpha\beta = 0 = \frac{m-1}{4}$$

$$4\alpha = 4 \rightarrow \alpha = 1 \rightarrow \beta = 1$$

$$\rightarrow m - 1 = 0 \rightarrow m = 1 \quad 4a^2 - 4a = 0 \quad \Delta = 0 \checkmark$$

$$-ma^r + ca + m^r - r = 0$$

(2)

$$p = \alpha + \frac{1}{\alpha} = 1 \Rightarrow \frac{c}{\alpha} = 1 \Rightarrow c = \alpha \Rightarrow m^r - r = -m$$

در صورتی

$$m^r + m - r = 0 \rightarrow (m+r)(m-1) = 0$$

(5)

$$\Delta > 0 \xrightarrow{m=1} b^r - c_{ac} = 14 - c(-1)(1) = 14 - c = 12 \quad \text{و و و}$$

$$\xrightarrow{m=-r} 14 - c(+2)(2) = 14 - 14 = 0 \quad \text{و و و}$$

$$\Rightarrow \boxed{m=1}$$

$$a^r - ma + p = 0 \quad \alpha \beta^r = c$$

(7)

$$p = \alpha \beta = \frac{c}{\alpha} = p$$

$$\frac{\alpha \beta^r}{\alpha \beta} = \beta = \frac{c}{p}$$

(1, 1, 0)

$$\beta \alpha = p \rightarrow \alpha = p \times \frac{p}{c} = \frac{p^2}{c} \quad \beta = \frac{p}{\frac{p^2}{c}} = \frac{c}{p} = \frac{27+14}{12} = \frac{c}{12}$$

$$m = \frac{p^2}{12}$$

$$a^r - \frac{p^2}{12} + p - \Delta > 0 \quad \checkmark$$

$$a^r - ca + m = 0 \quad \alpha \text{ و } p\alpha$$

(1, 1, 0)

$$S = \alpha + p\alpha = c\alpha = c \rightarrow \alpha = 1$$

$$p = \alpha(p\alpha) = 1 \times p = p \rightarrow m = p$$

$$a^r - c\alpha + p - \Delta > 0 \quad \checkmark$$

$$a^r - va + r = 0$$

$$\alpha^p + \frac{1}{\alpha^v} = ? \quad \boxed{p=1}$$

(1, 1, 0)

$$\alpha^r + r = va$$

$$\Rightarrow \alpha + \frac{r}{\alpha} = v$$

$$(\alpha + \frac{r}{\alpha})^p = \alpha^p + \frac{1}{\alpha^p} + 4(\alpha + \frac{r}{\alpha})$$

(5)

$$\Rightarrow \alpha^p + \frac{1}{\alpha^p} = (\alpha + \frac{r}{\alpha})^p - 4(\alpha + \frac{r}{\alpha})$$

$$= \underbrace{0}_{p=0} - 4\alpha v = p=1$$

تاریخ: / /

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$$h(t) = -1.0t^2 + 5.0t$$

$$y = \frac{-\Delta}{2a} = \frac{-25.0}{-2.0} = 12.5 \rightarrow \text{نقطه ارتفاع قوس}$$

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$$h=0 \rightarrow -1.0t^2 + 5.0t = 0 \rightarrow t(-1.0t + 5.0) = 0$$

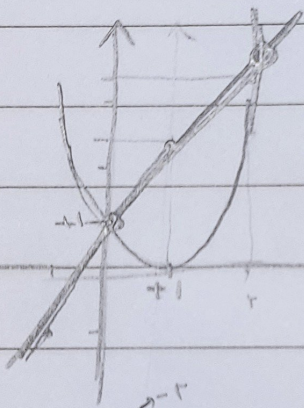
$$t = 0.2$$

ریشه که نزدیک به زمین می‌باشد حذف می‌شود

$$\omega = 1.0$$

$$(x-1)^2 = 2x+1 \quad \begin{array}{c|c|c|c|c} x & 0 & 1 & 2 & -1 \\ \hline y & 1 & 3 & 5 & -1 \end{array}$$

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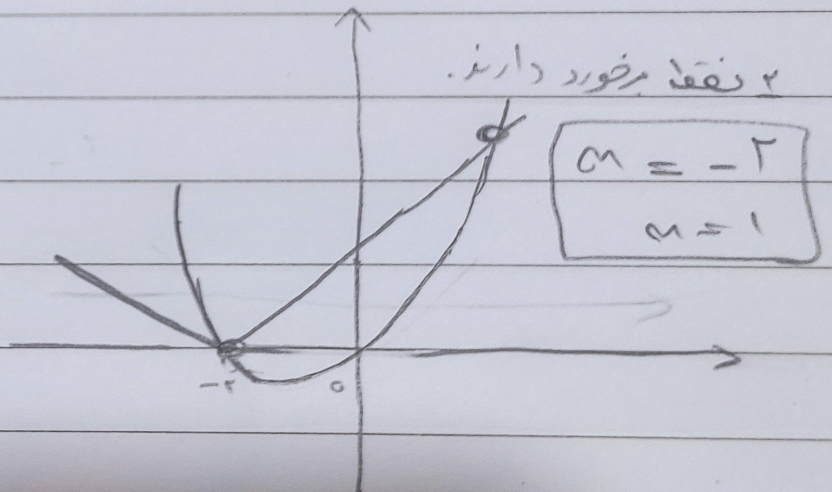


$$\begin{array}{l} x=0 \\ x=2 \end{array}$$

۲ محل برخورد دارند

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



۲ نقطه برخورد دارند

$$\begin{array}{l} x = -2 \\ x = 1 \end{array}$$