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SUBJECT

Year:

Month:

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نام و نام خانوادگی: فاطمه زهرا جمال زاده کلاس: هفتم دختره A تلفیق شماره: ۱

$$A \mid \begin{matrix} -1 \\ 9 \end{matrix} \rightarrow y = ax^2 + bx + c \quad (1)$$

$$9 = a - b + c \quad \underline{2a = b} \quad 9 = a - 2a + c$$

$$-1 = \frac{-b}{2a} \Rightarrow \underline{2a = b}$$

$$\underline{9 = c - a}$$

$$\hookrightarrow c = 9 + a$$

$$y = ax^2 + bx + c \xrightarrow{1^3} 1 = 9a + 3b + c$$

$$1 = 9a + 3(2a) + c$$

$$1 = 15a + c \rightarrow 1 = 15a + 9 + a$$

$$-11 = 16a$$

$$c = \frac{14}{16} \quad \underline{b = -1} \quad \frac{-1}{16} = a$$

$$y = \frac{-1}{16}x^2 - x + \frac{14}{16}$$

$$\begin{cases} \frac{-b}{2a} > 0 \rightarrow \frac{-m}{\frac{1}{16}} > 0 \rightarrow m < 0 \\ \frac{c}{a} > 0 \rightarrow \frac{m+9}{\frac{1}{16}} > 0 \rightarrow m > -9 \end{cases} \Rightarrow -9 < m < 0 \quad (2)$$

$$S = \frac{1}{p} \rightarrow 3m^2 + (2m-1)x + 2-m = 0 \quad (3)$$

$$\frac{1-2m}{p} = \frac{3}{2-m} \rightarrow (1-2m)(2-m) = 9$$

$$2m^2 - 5m + 2 = 9$$

$$x = \frac{5 \pm \sqrt{(-5)^2 - 4(2)(-7)}}{2(2)}$$

$$2m^2 - 5m - 7 = 0$$

$$= \frac{5 \pm 9}{4} \quad \begin{matrix} m = -1 \\ m = \frac{7}{2} \end{matrix}$$

Senobar



$$n^r - n - \Sigma = 0 \rightarrow n^r = n + \Sigma \quad *$$

$$S = n_1 + n_r = 1$$

$$P = n_1 n_r = -\Sigma$$

$$n^r = n \cdot n^r \xrightarrow{*b} n^r = n(n + \Sigma) \rightarrow n^r + \Sigma n \xrightarrow{*b}$$

$$n + \Sigma + \Sigma n = n^r$$

$$n_1^r = \omega n_1 + \Sigma \leftarrow n^r = \omega n + \Sigma$$

$$n_r^r = \omega n_r + \Sigma$$

$$\text{using } S' = n_r^r + \frac{1}{n_1} + n_1^r + \frac{1}{n_r} =$$

$$\omega n_r + \Sigma + \frac{1}{n_1} + \omega n_1 + \Sigma + \frac{1}{n_r} =$$

$$\omega(n_r + \frac{1}{n_1}) + 1 + (\frac{n_1 + n_r}{n_1 n_r}) =$$

$$\omega + 1 - \frac{1}{\Sigma} = \left(\frac{\omega}{\Sigma} \right)$$

$$P' = \left(n_r^r + \frac{1}{n_1} \right) \left(n_1^r + \frac{1}{n_r} \right) = \left(\omega n_r + \Sigma + \frac{n_r}{p} \right) \left(\omega n_1 + \Sigma + \frac{n_1}{p} \right)$$

$$= \left(\frac{19 n_r + 14}{\Sigma} \right) \left(\frac{19 n_1 + 14}{\Sigma} \right) = \frac{341(n_r + n_1) + 19 \times 14(n_1 + n_r) + 19 \times 14}{14}$$

$$= \frac{1 \Sigma \Sigma + 30 \Sigma + 264}{14} = \frac{11 \Sigma}{14} = \frac{22}{\Sigma}$$

$$\text{using } n^r - S' - P' = 0$$

$$n^r - \frac{\omega}{\Sigma} n - \frac{22}{\Sigma} = 0 \rightarrow \Sigma n^r - \omega n - 22$$

$$\left(\sqrt[r]{n^r} + \frac{1}{\sqrt[r]{n^r}} + 1 \right) (\sqrt[r]{n^r} - 1) = r \sqrt[r]{n} \quad (a)$$

$$\sqrt[r]{n^r} = t \Rightarrow \left(t + \frac{1}{t} + 1 \right) (t - 1) = r \sqrt{t}$$

$$\frac{(t^2 + 1 + t)(t - 1)}{t} = r \sqrt{t}$$

$$\frac{(t^3 - 1)}{t} = r \sqrt{t} \xrightarrow{\text{مربع}} (t^3)^2 + 1 - r t^{\frac{r}{2}} = r t^{\frac{r}{2}}$$

$$\Rightarrow (t^3)^2 - 4t^{\frac{r}{2}} + 1 = 0$$

$$t^{\frac{r}{2}} = a \rightarrow a^2 - 4a + 1 = 0 \Rightarrow a = \frac{4 \pm \sqrt{16 - 4(1)(1)}}{2} = \frac{4 \pm 2\sqrt{3}}{2}$$

$$\downarrow \quad a \rightarrow 2 \pm \sqrt{3}$$

$$(\sqrt[r]{n^r})^{\frac{r}{2}} = a \rightarrow n^{\frac{r}{2}} = 2 \pm \sqrt{3} \quad \text{بما أن } t = \sqrt[r]{n^r} \Rightarrow t^{\frac{r}{2}} = \sqrt[r]{n^{\frac{r^2}{2}}}$$

$$n^{\frac{r}{2}} \rightarrow 2 - \sqrt{3} \Rightarrow n^{\frac{r}{2}} = (\sqrt{2} - 1)^2 \rightarrow n_1 = (\sqrt{2} - 1)^2$$

$$n^{\frac{r}{2}} \rightarrow 2 + \sqrt{3} \Rightarrow n^{\frac{r}{2}} = (1 + \sqrt{2})^2 \rightarrow n_2 = (1 + \sqrt{2})^2$$

$$\Rightarrow n_1 + n_2 \rightarrow 1 + \sqrt{2} - (1 + \sqrt{2}) = 0$$

$$r n^r - a n + \varepsilon = 0$$

$$n_r = r n_1 \rightarrow S = n_1 + n_r = r n_1 = \frac{-b}{a} \Rightarrow \varepsilon n_1 = \frac{a}{r} \rightarrow \alpha = \frac{1}{r} n_1$$

$$p = n_1 n_r = r n_1^2 = \frac{\varepsilon}{r} \rightarrow n_1^2 = \frac{\varepsilon}{r}$$

$$n_1 = \pm \frac{r}{\sqrt{\varepsilon}}$$

$$a = 1/r n_1 \quad n_1 = \frac{r}{\sqrt{\varepsilon}} \rightarrow a_1 = 1$$

$$n_1 = \frac{r}{\sqrt{\varepsilon}} \rightarrow a_r = -1$$

$$|a_1 - a_r| = |1 - (-1)| = 2$$

Senobar

$$y = ax^2 + (r+ra)x \quad \text{if } r \neq 0, a > 0 \quad (1)$$

$$\frac{r+ra}{a} > 0 \quad \rightarrow \quad -\frac{b}{a} \geq 0$$

$$-(r+ra) \geq 0 \quad \rightarrow \quad r+ra \leq 0 \quad \rightarrow \quad r \leq -ra \quad \rightarrow \quad \frac{r}{r} \geq a$$

$$\frac{-r}{r} \leq a < 0$$

$$(1) y = x^2 + ax - r \quad \rightarrow \quad \frac{-b}{ra} = \frac{-a}{r} \quad (1)$$

$$(2) y = -x^2 - rx + b \quad \rightarrow \quad \frac{-b}{ra} = \frac{r}{-r} = -1 \quad \rightarrow \quad \frac{-a}{r} = -1$$

$$\boxed{a = r}$$

$$(1) y = x^2 + rx - r \quad y=1, \quad 1 = x^2 + rx - r$$

$$(2) y = -x^2 - rx + b \quad y=1, \quad 1 = -x^2 - rx + b$$

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

$$rx^2 + rx - r + b = 0 \quad x=-1$$

$$ab = r \times \varepsilon = 1 \quad r(-1)^2 + \varepsilon(-1) - r + b = 0 \Rightarrow \boxed{b = \varepsilon}$$

$$rx^2 - ax + b = 0 \quad \rightarrow \quad \alpha' + \beta' = \frac{a}{r} \quad (9)$$

$$\alpha' \beta' = \frac{b}{r}$$

$$rx^2 + ax - r = 0 \quad \rightarrow \quad \alpha + \beta = \frac{-a}{r} \quad \alpha + \frac{1}{r} + \beta + \frac{1}{r}$$

$$\alpha \beta = -r \quad \frac{-a}{r} + 1 = \frac{a}{r}$$

$$\alpha' = \alpha + \frac{1}{r} \quad \boxed{1 = a}$$

$$\beta' = \beta + \frac{1}{r}$$

$$\alpha' \beta' = \frac{b}{r} \Rightarrow \left(\alpha + \frac{1}{r}\right) \left(\beta + \frac{1}{r}\right) = \frac{b}{r}$$

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

$$-r + \frac{1}{r} \left(\frac{-a}{r}\right) + \frac{1}{r^2} = \frac{b}{r}$$

$$-r + \frac{1}{r} \left(\frac{-1}{r}\right) + \frac{1}{r^2} = \frac{b}{r}$$

$$-r = \frac{b}{r} \Rightarrow \boxed{b = -r}$$

$$\left[\frac{ab}{r}\right] = \left[\frac{-4}{r}\right] = \left[\frac{-r}{r}\right] = -r$$

$$(1) x^r + yx - rm = 0 \Rightarrow x^r + yx - r(-4x - x^r) \quad (10)$$

$$x^r + yx + 4rx + rx^r \rightarrow rx^r + y_0x = 0$$

$$(2) x^r + 4x + m = 0 \rightarrow m = -4x - x^r$$

$$f(x) (x+\omega) = 0$$

$$f(x) = 0 \rightarrow x = 0$$

$$x + \omega = 0$$

$$\checkmark \boxed{x = -\omega}$$

0 0 0

$$m = -4(-\omega) - (-\omega)^r$$

$$m = r_0 - r\omega = \omega$$

$$(1) x^r + yx - l\omega = 0 \quad x = -\omega \quad x = r$$

$$\Rightarrow r - (-1) = 2$$

$$(2) x^r + 4x + \omega = 0 \Rightarrow x = -1 \quad x = -\omega$$