

به نام خداوند بزرگوار کنان

# درسارهائی - تکلیف ریاضی



شرکت انتقال گاز ایران  
منطقه دو عملیات انتقال گاز

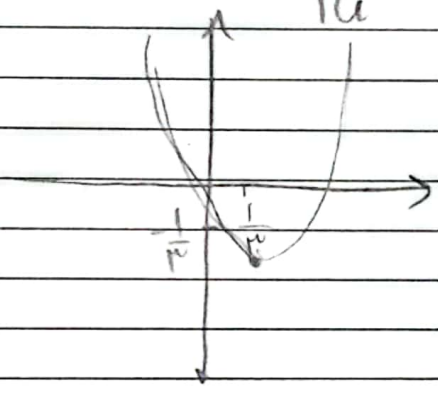
یادداشت

تاریخ: / /

(الف)  $y = 3x^2 - 200$

$$x = \frac{-b}{2a} = \frac{+2}{6} = \frac{1}{3}$$

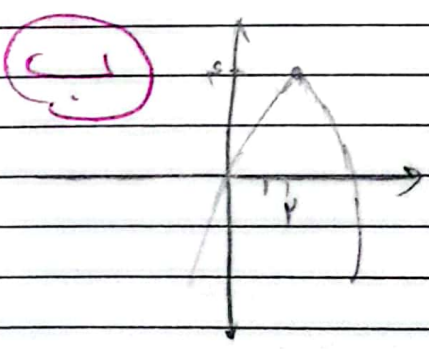
$$y = 3 \times \frac{1}{9} - \frac{1}{3}$$
$$y = -\frac{1}{3}$$



از ناصبی درم نمی‌کند

(ب)  $y = -x^2 + 4x$

$$x = \frac{-b}{2(-1)} = \frac{-4}{-2} = +2$$



$$y = -4 + 8 = 4$$

از ناصبی درم نمی‌کند

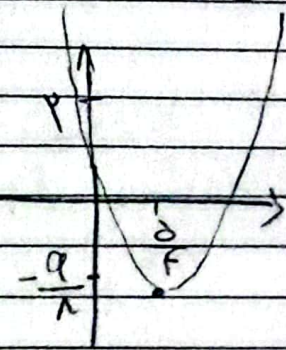
(ج)  $y = 2x^2 - 5x + 2$

$$x = \frac{+5}{4}$$

$$\Delta = 25 - 4(4)$$
$$\Delta = 9$$

$$y = \frac{-\Delta}{4(a)} = \frac{-9}{8}$$

از ناصبی درم نمی‌کند

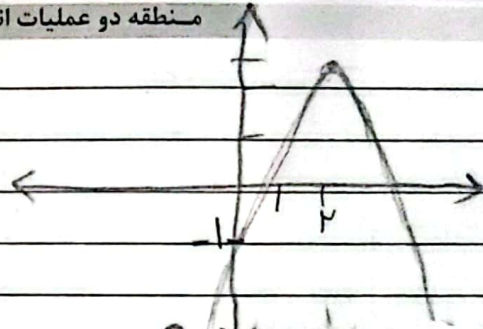




ب)  $y = -x^2 + 4x - 1$

$$x = \frac{-b}{2a} = \frac{-4}{2(-1)} = 2$$

$$y = -2^2 + 4(2) - 1 = 3$$



از فرمای یک و سه در حساب می کردیم

$$\begin{aligned} \text{الف) } \frac{\alpha + \beta}{\alpha - \beta} &= \frac{-b}{a} \cdot \frac{1}{\sqrt{\Delta}} = \frac{1}{\sqrt{13}} \\ &= \frac{1}{\sqrt{13}} \cdot \frac{\sqrt{13}}{\sqrt{13}} = \frac{\sqrt{13}}{13} \end{aligned}$$

$$\begin{aligned} x^2 - x - 3 &= 0 \\ \Delta &= 1 - 4(-3)(1) \\ \Delta &= 1 + 12 = 13 \\ \alpha\beta &= \frac{c}{a} = -3 \end{aligned}$$

ب)  $\alpha^2 + \beta^2 = (\alpha + \beta)^2 - 2\alpha\beta = (1)^2 - 2(-3) = 1 + 6 = 7$

ج)  $\alpha^3 + \beta^3 = (\alpha + \beta)(\alpha^2 + \beta^2 - \alpha\beta) = 1(7 + 3) = 10$

د)  $(\alpha + \beta)^3 - 3\alpha\beta(\alpha + \beta)$

$$1^3 - 3(-3)(1) = 9 + 1 = 10$$

د)  $\alpha^3 - \beta^3$

$$(\alpha - \beta)(\alpha^2 + \beta^2 + \alpha\beta) =$$

$$\sqrt{13} (7 + (-3)) = 4\sqrt{13}$$

البته می تونه  $\pm 4\sqrt{13}$  باشه بستگی به علامت داره



در یک نقطه فقط داریم  
داریم باره!

$$y = (x-2)(x^2 - ax + a)$$

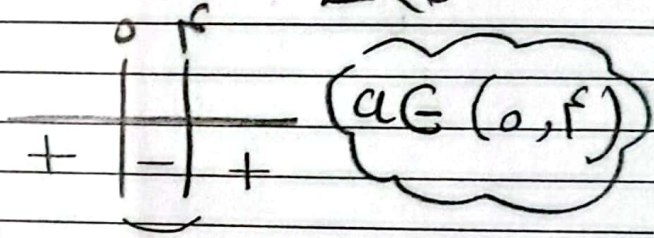
که در ۲

$\Delta < 0$

$$a^2 - 4 < 0$$

$$a^2 - 4a < 0$$

$$a(a-4) < 0$$



$$\mu x^2 - 12x - a = 0$$

$$\alpha + \beta = \frac{+12}{\mu} = +12$$

$$\mu \alpha^2 + \beta^2 - 12\alpha = 12$$

$$\alpha\beta = -a$$

$$\alpha^2 + \alpha^2 + \beta^2 - 12\alpha = 12$$

$$\Rightarrow \alpha^2 - 12\alpha + 9 + \frac{12a}{\mu} = 0$$

$$(\alpha + \beta)^2 - 2\alpha\beta$$

$$\alpha(\alpha - 12)$$

$$= (12)^2 - 2(-a)$$

$$-12 + 9 + \frac{12a}{\mu} = 0$$

$$144 + \frac{12a}{\mu}$$

$$\frac{a}{\mu} + 9 + \frac{12a}{\mu} = 0$$

$$\frac{13a}{\mu} + 9 = 0$$

$$a = -9$$

$$\mu x^2 - 12x - 9 = 0 \quad \times \frac{1}{\mu}$$

$$x^2 - 12x + 12 = 0$$

$$\frac{a}{\mu} = \frac{-9}{\mu} = -12$$

$$(x-1)(x-12) = 0$$

بدست



۴ نسبت خط انتقال لوله قرینه همدار

$$S(b, b-r) \quad \frac{V_1 \rho_1 + V_2 \rho_2}{r} = \rho$$

خط سازه

$$y = a(x-h)^2 + k \quad \frac{1}{r} = d$$

$$y = a(x-d)^2 + r^2 \quad y = ax - da + r^2$$

$$a-r = a(ra+r^2) - da + r^2$$

$$a-r = r^2 a + r^2 a - da + r^2$$

$$0 = r^2 a - r^2 a + d$$

$$\alpha = 1 - \beta$$

$$\alpha + \beta = \frac{a}{a} = 1$$

$$\alpha^2 + \beta^2 = (\alpha + \beta)^2 - 2\alpha\beta$$

$$\alpha\beta = \frac{-b}{a}$$

$$\alpha - \beta = \frac{-\sqrt{\Delta}}{|a|}$$

$$= \frac{\sqrt{a^2 + 4ab}}{a}$$

$$ax^2 - ax - b = 0$$

$$r_0 \beta^2 + r_1 \alpha^2 - r_0 \beta = 1V$$

$$r_0 (\beta^2 + \alpha^2) + r_1 \beta - r_0 \beta = 1V$$

$$r_1 (\alpha^2 + \beta^2) + r_1 \beta (\beta - 1) = 1V$$

$$r_0 (1) - r_1 \left(\frac{-b}{a}\right) + r_0 \beta (-a) = 1V$$

$$r_0 (-\alpha\beta) = 1V$$

$$r_0 \left(\frac{+b}{a}\right)$$

$$r_0 + \frac{r_1 b}{a} + \frac{r_0 b}{a} = 1V$$

$$r_0 + \frac{r_1 b}{a} = 0$$

$$\frac{r_1 b}{a} = -r_0$$

$$r_1 b = -r_0 a$$



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$(-\delta, \beta)$      $(\beta, \gamma)$     1

$y = a(\infty - h) + k$

$\frac{-\delta + 1}{\gamma} = \frac{-\gamma}{\gamma} = -1 = \infty$   
خط متان  
سی

$y = a(\infty + \gamma) - \frac{1}{\gamma}$

سی سی سی =  $-\frac{1}{\gamma}$

$y = a\infty + \gamma a - \frac{1}{\gamma}$

$c = \frac{\gamma}{\gamma}$

$\alpha < \beta < \infty$

$\infty + \gamma \infty + a = 0$

$\alpha + \beta = \gamma$      ~~$\alpha \beta = a$~~

$\beta > \alpha$     9

$\gamma \alpha^2 + \gamma \beta^2 = 1\gamma\sqrt{\gamma} + 1\delta$

$\alpha^2 + \gamma \infty + a = 0$

$(-1\infty - \gamma a)(-1\gamma \infty - \gamma a) = 1\gamma\sqrt{\gamma} + 1\delta$

$\alpha^2 = -\gamma \infty - a$     15

$\alpha^2 + \beta^2 + \gamma \alpha^2 + \gamma \beta^2$

$\gamma \alpha^2 = -1\infty - \gamma a$

$\gamma(\alpha^2 + \beta^2) + \alpha^2$

$\gamma \beta^2 = -1\gamma \infty - \gamma a$

$\gamma(\gamma \gamma) - \gamma a - \gamma \infty - a =$

$\gamma(a + \beta)^2 - \gamma(\alpha \beta) + \alpha^2$

$\gamma \gamma \infty - (m + 1\gamma) \infty + 1 = 0$

$a = \frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}}$     10

$\alpha \beta = \frac{1}{\gamma \gamma}$      $\alpha + \beta = \frac{m + 1\gamma}{\gamma \gamma}$

$\gamma \delta = \frac{1}{\alpha} + \frac{1}{\beta} + \frac{\gamma}{\sqrt{\alpha \beta}}$

$m + 1\gamma \leftarrow \frac{\alpha + \beta}{\alpha \beta} \gamma \leftarrow \sqrt{\gamma \gamma}$



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تاریخ:

$$m\alpha + \mu\beta + \gamma = 0$$

$$\alpha/\beta = \frac{\gamma}{m}$$

$$\gamma \times \frac{\mu}{\gamma} = \frac{\mu}{\mu}$$

$$\gamma\delta = m + \frac{\gamma}{\mu}$$

$$\delta - \frac{\gamma}{\mu} = m$$