

$$y = -x^2 + bx + 12 \rightarrow -x^2 + 5x + 12$$

$$\max x = 5$$

$$-\frac{\Delta}{2a} = 5 \rightarrow \frac{7(b^2 + 12)}{7^2} = 5 \rightarrow b^2 + 12 = 28 \rightarrow b^2 = 16 \rightarrow b = \pm 4$$

$$f(x) = x^2 + 2x + 12 \xrightarrow{x=t} t^2 + 2t + 12 \rightarrow \Delta < 0 \rightarrow \text{جواب ندارد}$$

$$f(x) = (x - x^2)^2 - 2(x - x^2) - 12 \Rightarrow x - x^2 = t$$

$$\hookrightarrow t^2 - 2t - 12 \rightarrow (t - 4)(t + 3) = 0 \hookrightarrow -x^2 + x = -4$$

$$\alpha = \beta + 2$$

$$\hookrightarrow |\alpha - \beta| = 2 \rightarrow \frac{\sqrt{(14)^2 - 14m}}{2} = 2 \Rightarrow (14)^2 - 14m = 16 \hookrightarrow m = 12$$

$$\hookrightarrow \alpha - \beta = 2$$

$$\alpha + \beta = -\frac{b}{a} \rightarrow \frac{14}{2} = 7 \left\{ \begin{array}{l} \alpha = 3 \\ \beta = 1 \end{array} \right.$$

$$x^2 = -V \Rightarrow x = \pm \sqrt{-V}$$

$$x^2 - 14x + 12 = 0$$

$$2\alpha - \beta = 7$$

$$\hookrightarrow 2\alpha - \beta = 7 \Rightarrow \alpha = 2 \Rightarrow \beta = 0$$

$$\alpha + \beta = 2$$

$$\hookrightarrow \alpha = 2 - \beta$$

$$\hookrightarrow 2\alpha = 7 - 2\beta$$

$$\hookrightarrow \alpha \cdot \beta = 0$$

$$\hookrightarrow m - 1 = 0 \Rightarrow m = 1$$

$$\alpha \cdot \beta = 1 \rightarrow C/a = 1 \rightarrow m^2 - 2 = -m$$

$$\hookrightarrow m^2 + m - 2 = 0 \rightarrow (m + 2)(m - 1) = 0 \Rightarrow m = 1$$

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

$$\hookrightarrow \Delta = 4 - 4(-m^2 + 2) = 4m^2 - 4$$

$$-x^2 + 2x - 1 = 0 \quad x^2 + 2x + 1 = 0$$

$$\alpha \cdot \beta = \beta = r$$

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

$$\alpha \cdot \frac{14}{9} = r \rightarrow \alpha = \frac{r \cdot 9}{14} \rightarrow \alpha + \beta = \frac{9}{r} + \frac{r}{9} \rightarrow \frac{r^2 + 14}{1r} \rightarrow \boxed{\frac{r^2}{1r}} \rightarrow m$$

1,10

$$x^y - r x + m = 0$$

$$\alpha = r \beta$$

$$\hookrightarrow \alpha + \beta = r \beta \rightarrow r - \beta = 1$$

$$(\alpha = r)$$

$$\alpha \cdot \beta = r \rightarrow m = r$$

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

1,10

$$\frac{x^y + 1}{x + r}$$

$$\rightarrow \frac{(x^y + 1)(x^r + r - r x^r)}{(x^y + 1)^r (x^r + r)^r} = \frac{r x^r}{(x^y + 1)^r}$$

5

$$- \ln t^y + \Delta \ln t \rightarrow - \frac{\Delta}{\ln t} = - \frac{r \Delta \ln t}{r \ln t} = \boxed{r \ln t}$$

5

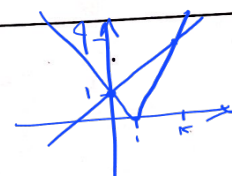
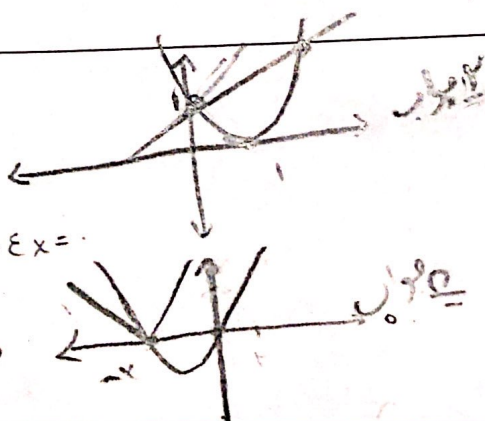
$$- \ln t^y + \Delta \ln t = 0 \rightarrow -t^y + \Delta t = 0 \rightarrow t(-t + \Delta) = 0 \rightarrow t = \Delta$$

$$(x-1)^y = r x + 1$$

$$\hookrightarrow \frac{n=0}{n=\varepsilon}$$

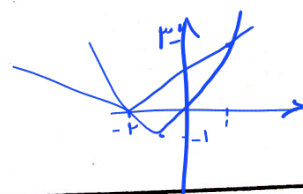
$$x^y - r x + 1 = r x + 1 \rightarrow x^y - \varepsilon x = 0$$

$$x^y + r x = |x + r|$$



$$x = -r$$

1,0



$$x = -r, 1$$

$$x^y - r x = 1$$

$$x^y - r x + 1 = r x + 1$$

$$x^y - r x = x(x - r)$$