

الف) $y = vx^v - fx + 1$ (1)

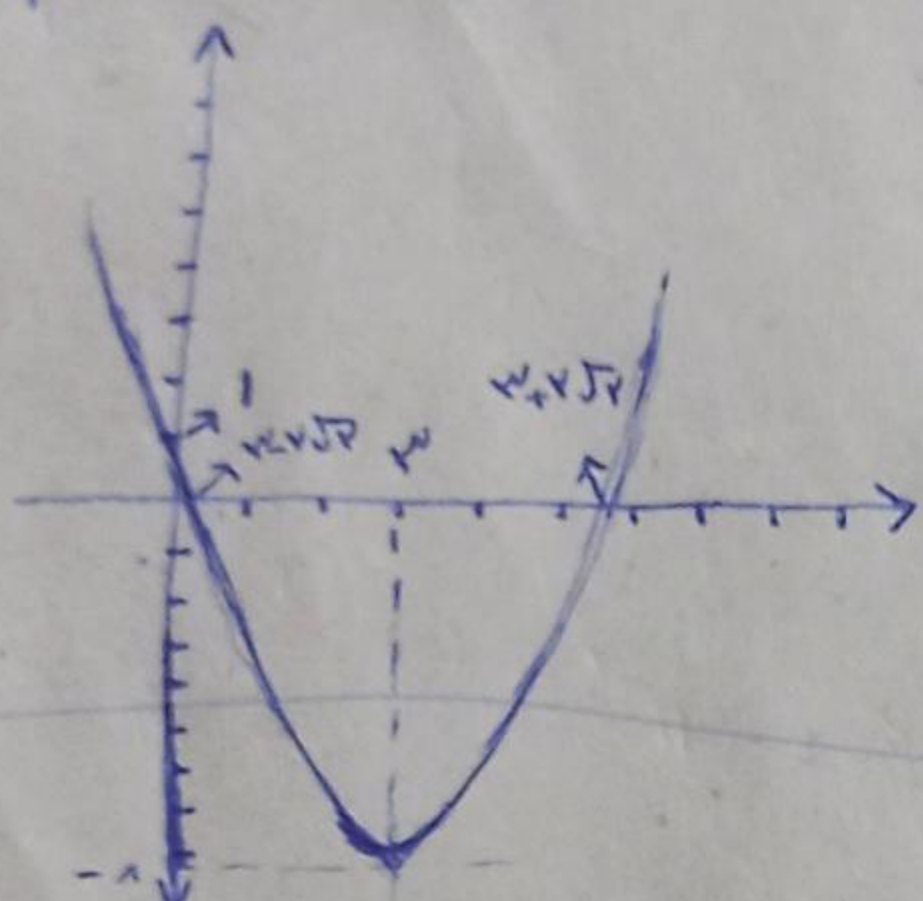
ext = min λ ext λ | $\frac{-b}{va} = \frac{+f}{v} = 1$
 min λ | $\frac{-\Delta}{fa} = \frac{f\sqrt{v+1}-14}{f+v}$
 ext | $\frac{1}{-1}$

ب) $y = -vx^v + vx - a$
 ext = max λ max | $\frac{-b}{va} = \frac{-v}{v-v} = \frac{v}{v}$
 $y_{ext} = -v \left(\frac{v}{v}\right)^v + v \times \frac{v}{v} - a = \frac{v-1}{v}$

max | $\frac{v}{v}$
 $\frac{-v-1}{v}$

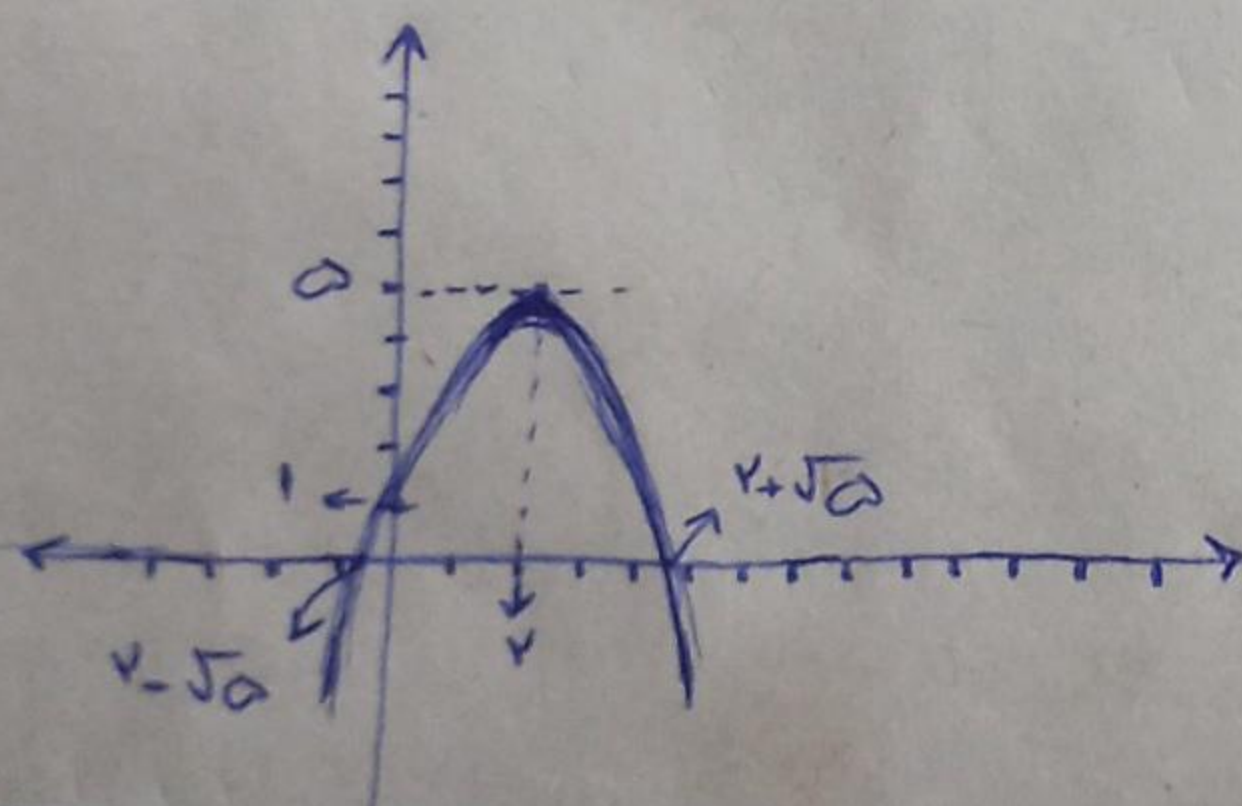
$x^v - vx + m = 0$ (2)
 $(\sqrt{x_1} - \sqrt{x_2})^2 = 1$
 $\frac{x_1 + x_2}{\sqrt{m}} - \sqrt{\frac{x_1 x_2}{m}} = 1$
 $\sqrt{m} - \sqrt{m} = 1 \Rightarrow \sqrt{m} = 1$
 $v + v - v + 1 = 0$
 $+v - v + -v = 0 \Rightarrow \left(\frac{v}{v} - \frac{v}{v}\right) \left(\frac{v}{v} + \frac{v}{v}\right) = 0$
 $v = \sqrt{m} = 1 \Rightarrow m = 1$
 $vx^v - mx - m = 0 \Rightarrow vx^v - vx - 1 = 0$
 $\alpha \times B = \frac{c}{a} = \frac{-1}{v}$

ج) $y = x^v - 4x + 1$ (3)



$S_{\Delta} = \frac{1}{v} (x_1 - x_2) \times c$ (3)
 $\frac{1}{v} \left(\frac{\sqrt{\Delta}}{|a|}\right) \times m = \frac{1}{v} \left(\frac{m-v}{v}\right) \times m = \frac{v}{v}$
 $\frac{1}{v} m^v - \frac{1}{v} m - \frac{v}{v} = 0$
 $m^v - vm - v = 0 \Rightarrow (m-v)(m+1) = 0$
 $y = x^v - mx + 1 \rightarrow x^v - vx + 1 = y \Rightarrow x_1^v = \frac{v}{v}$
 $y = x^v + x + 1 \Rightarrow x_2^v = \frac{-1}{v}$

د) $y = -x^v + fx + 1$



$y = ax^v + vx + a \rightarrow a > 0 \Rightarrow$ min λ (4)
 $y_{ext} = \frac{-\Delta}{fa} = \frac{fa^v - a}{fa} = \frac{v}{\lambda} \Rightarrow a = \frac{v}{\lambda} a^v - v$
 $v \frac{v}{\lambda} a^v - v \lambda a - v = 0 \Rightarrow \lambda a^v - v a - \lambda = 0$
 $a^v - v a - \lambda \times \lambda = 0 \Rightarrow \left(\frac{a-1}{v}\right) \left(\frac{a+1}{v}\right) = 0$
 $a = v \rightarrow$ نقطة تقاطع (5)

$(a+B)^v = \frac{a^v + B^v + v a B}{a} = 1$ (6)
 $(a-B)^v = a^v + B^v - v a B = a + f = a$
 $|a-B| = \dots$
 $a+B = 1 \Rightarrow a=v, B=-1$

$x^v - (a+1)x + a = 0$ (7)
 $x_1 + x_2 = v x_1 + v = \frac{a+1}{v}$
 $x_1 = \frac{a-1}{v}, x_2 = \frac{a+1}{v}$
 $\left(\frac{a+v}{v}\right) \left(\frac{a-1}{v}\right) = \frac{a}{v} \Rightarrow a^v + va - v = fa$
 $a^v - va - v = 0 \Rightarrow (a-v)(a+1) = 0$
 $\Rightarrow x_1 = 1, x_2 = v$

$fx^v + kx^v - ax - v = 0$
 $fx^v + kx^v - ax - v = -f + k + a - v$
 $v k = -a \Rightarrow k = -v$

$x^v - (a+1)x + b = x^v - 10x + b = 0$
 $\alpha + B = \frac{v}{v} a + v = -10 \Rightarrow \alpha = -9, B = -1$
 $\alpha + v = B$
 $\alpha B - x_1 x_2 = (-9)(-1) - 1 \times v = v$

$$x^r - (a^r + b^r - 1r)x + a + b - 1 = 0$$

(10)

$$a + b = \frac{-b}{a} \Rightarrow a + b = a^r + b^r - 1r \quad \textcircled{I}$$

$$a + b = (a + b)^r - r ab - 1r$$

$$a + b = s$$

$$ab = p$$

$$p = ab = \frac{c}{a} = \frac{a + b - 1}{1}$$

$$p = a + b - 1 \quad \textcircled{II}$$

$$p = s - 1$$

$$s = s^r - rp - 1r \quad \textcircled{III} \rightarrow s = s^r - rs + r + 1r$$

$$s^r - r^2 s - 10 = 0$$

$$s = \frac{r \pm \sqrt{r^2 + 40}}{r}$$

$$s_1 = \frac{r - \sqrt{r^2 + 40}}{r} = -r \times \bar{\omega} \bar{\epsilon}$$

$$s_2 = \frac{r + \sqrt{r^2 + 40}}{r} = \frac{10}{r} = 0 \quad \checkmark$$

$$x_1 = \frac{-b}{ka} = \frac{-a}{-ka} = \frac{1}{k}$$

$$x_1 = \frac{1}{k} \Rightarrow y_1 = \frac{-a}{k} + \frac{ka}{k} + r = \frac{kb}{k} - \frac{b}{k} - 1$$

$$x_r = \frac{-b}{ka} = \frac{b}{k \times kb} = \frac{1}{k}$$

$$\frac{a}{k} = -k \quad \boxed{a = -1k}$$

$$x_r = \frac{1}{k} \Rightarrow y_r = \frac{-a}{1k} + \frac{ka}{1k} + r = \frac{kb}{1k} - \frac{kb}{1k} - 1$$

$$y_r = \frac{ka}{1k} + r = \frac{-kb}{1k} - 1 = \frac{-b}{k} - 1$$

$$y_r = \frac{-4}{1k} + r = \frac{-b}{k} - 1$$

$$y_r = \frac{-4}{k} + \frac{ka}{k} = \frac{-b}{k}$$

$$\frac{2}{k} = \frac{-b}{ka}$$

$$\boxed{b = -4}$$

$$b - a = -4 - (-1k) = -4 + 1k = 4$$

$$\alpha B = \frac{c}{a} \Rightarrow \alpha B = \frac{b}{ka} \quad , \quad \text{~~Other scribbles~~}$$

$$\alpha = \pm \frac{1}{a} \rightarrow + \frac{1}{a} \quad \text{~~Other scribbles~~}$$

$$\boxed{\alpha = -\frac{1}{a}}$$

$$\alpha + B = \frac{-b}{a}$$

$$-\frac{1}{a} + B = \frac{-k}{ka(-\frac{1}{a})}$$

$$B = \frac{k}{a} + \frac{1}{a} = 1$$

$$\boxed{B=1} \Rightarrow \text{رابطه } \left(\frac{+k}{a}, \frac{a}{a}\right)$$

نص اول

$$\begin{cases} \text{م } x = \frac{-b}{ka} = \frac{k}{a} \\ \text{م } y = \frac{ka - b^k}{ka} = \frac{a}{a} \end{cases}$$

$$\text{م } y = \frac{ka - b^k}{ka} = \frac{a}{a}$$

9