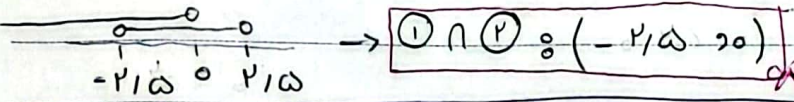


19, 5

$$-\frac{b}{2a} = \frac{-1}{2(\alpha-1)} = \frac{1}{2} \rightarrow \frac{1}{\alpha-1} = 1 \rightarrow \frac{1}{\alpha} - \frac{1}{\alpha-1} = -1 \rightarrow \frac{1}{\alpha} = \frac{1}{\alpha-1} - 1 \rightarrow \frac{1}{\alpha} = \frac{1 - (\alpha-1)}{\alpha-1} = \frac{2-\alpha}{\alpha-1} \rightarrow \alpha = \frac{1}{\frac{2-\alpha}{\alpha-1}} \Rightarrow y = \frac{1}{\alpha} x^2 + x + \frac{1}{\alpha}$$

$$x = \frac{-1 \pm \sqrt{1+4}}{-\frac{1}{\alpha}} \rightarrow \frac{-1 \pm \sqrt{5}}{-\frac{1}{\alpha}} \rightarrow \alpha \left(-1 \pm \sqrt{5} \right)$$

① $m < 0$ ② $\Delta > 0 \rightarrow 4\omega - 4(m^2) > 0 \rightarrow 4\omega > 4m^2 \rightarrow m^2 < \omega \rightarrow -\sqrt{\omega} < m < \sqrt{\omega}$



$$S = \frac{1 - \sqrt{5} + 1 + \sqrt{5}}{1} = 2 \quad D = \frac{1 - \sqrt{5}}{1} \times \frac{1 + \sqrt{5}}{1} = 1 - 5 = -4$$

$$y = x^2 - 2x + \frac{4}{9} \rightarrow \text{ضرایب مساوی}$$

$$\alpha B = \frac{9B}{\alpha} \rightarrow \alpha = \frac{9}{B}$$

$$\alpha + B = \frac{9}{\alpha} \rightarrow \alpha^2 + B\alpha - 9 = 0 \rightarrow \alpha = \frac{-B \pm \sqrt{B^2 + 36}}{2}$$

$$-\frac{b}{2a} = \frac{1}{2} \rightarrow b = -1 \quad y = ax^2 + bx + a \rightarrow \frac{1}{2} = \frac{a+b}{2a} \rightarrow 1 = \frac{a+b}{a} \rightarrow 1 = 1 + \frac{b}{a} \rightarrow \frac{b}{a} = 0 \rightarrow b = 0$$

$$y = -x^2 + 4x + 5 \rightarrow x^2 - 4x - 5 = 0 \rightarrow (x+1)(x-5) = 0 \rightarrow x = -1, 5$$

$$\alpha + B = 4 \quad \alpha B = \frac{m+1}{1} \rightarrow B = 4 - \alpha \rightarrow \alpha(4-\alpha) = m+1 \rightarrow \alpha^2 - 4\alpha + m+1 = 0$$

$$(\alpha-1)^2 = 0 \rightarrow \alpha = 1 \Rightarrow B = 3 \rightarrow \alpha B = 3 = \frac{m+1}{1} \rightarrow m = 2$$

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

$$m \rightarrow -1 \Rightarrow \Delta < 0 \rightarrow \text{قوة عكس} \rightarrow 1 \rightarrow x^2 + 1x - 1 = 0 \rightarrow S = -1$$



$\frac{-\Delta}{ka} = 1 \rightarrow -14 + 2m^2 + 21m = 22m \rightarrow 2m^2 - 1m - 14 = 0 \rightarrow (2m-1)(m+14) = 0$ (1)

$m \xrightarrow{2} k \rightarrow 2 \rightarrow 2 \rightarrow 2$

$2x^2 + kx + 4 = 0 \rightarrow (x+1)(-2x+4) = 0 \rightarrow x \xrightarrow{2} -1 \rightarrow 2 \rightarrow k$ (5)

$k = 2$

$\frac{b}{ka} = 2 \rightarrow b = 2ka \quad \frac{\Delta}{-ka} = 4 \rightarrow \frac{b^2 - ka(ka)}{b} = 4 \rightarrow b^2 + kb = 4b$ (9)

$b(b-2) = 0 \rightarrow b \xrightarrow{2} 2 \rightarrow y = -\frac{x^2}{2} + 2x + 2$ (5)

$\frac{1}{a} + \frac{1}{b} = \frac{a+b}{ab} = \frac{1}{2}$

$x=2 \rightarrow 2a^2 - ka - 1 = 0 \rightarrow a \rightarrow 1 \rightarrow x^2 - 11x + 12 = 0 \rightarrow x \xrightarrow{2} 2 \rightarrow 4$
 $\rightarrow -\frac{1}{2} \rightarrow 2x^2 - 11x + k = 0 \rightarrow x \xrightarrow{2} 2 \rightarrow \frac{1}{2}$ (5)

$x \xrightarrow{2} 2 \rightarrow \frac{1}{2} \rightarrow 4$

بیخبر سوال ۳ و ۴ رو جایگا دوستم. اولس ۳ رو استباه حل کرده بودم. :)