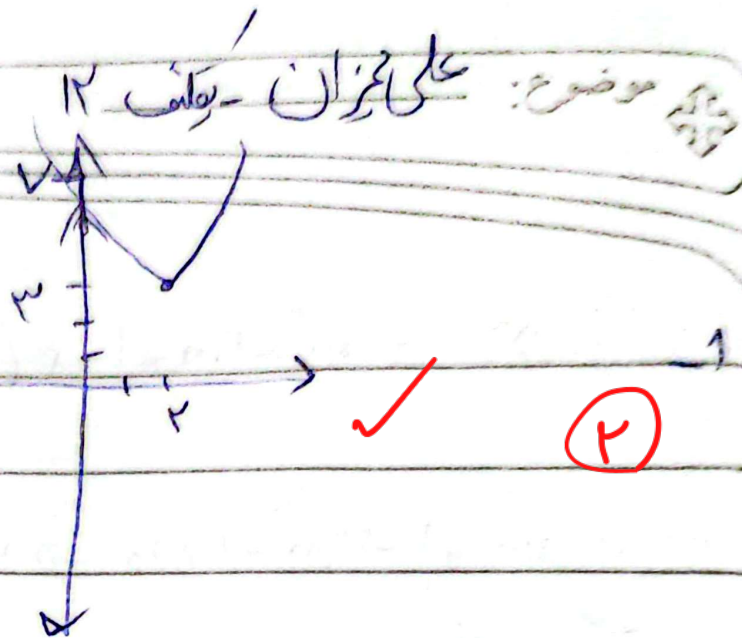


الف) $x^2 - 4x + 7 = y$

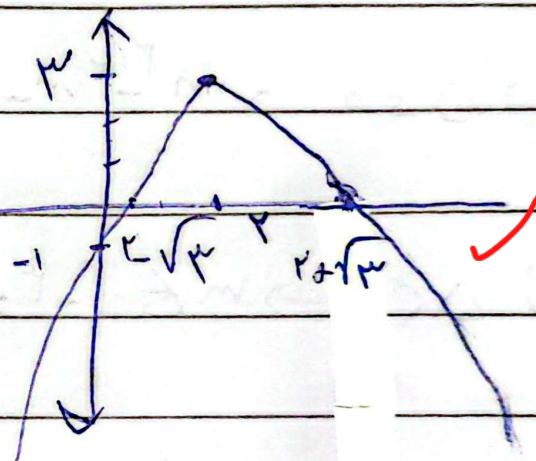
$-\frac{b}{2a} \leq x \leq \frac{b}{2a}$
 $y \leq \frac{4ac - b^2}{4a}$



ب) $-x^2 + 4x - 1 = y$

$-\frac{b}{2a} \leq x \leq \frac{b}{2a}$
 $y \leq \frac{4ac - b^2}{4a}$

لذا درستی را با رسم نمودار می‌توانیم بررسی کنیم.





۲- (۲) $\Delta > 0 \rightarrow m^2 + 2m + 1 - 4(m+4) > 0$ (الف)

$m^2 + 2m + 1 - 4m - 16 > 0 \rightarrow m^2 - 2m - 15 > 0 \rightarrow (m-5)(m+3) > 0$

$\frac{-2}{\pm 1 - 1 \pm} \rightarrow m \in (-\infty, -3) \cup (5, +\infty)$ ✓

ب) $\Delta = 0 \rightarrow m^2 - 2m - 15 = 0 \rightarrow m = 5, m = -3$ ✓

ج) $\Delta < 0 \rightarrow m \in (-3, 5)$ ✓

د) $\Delta \geq 0 \rightarrow m \in (-\infty, -3] \cup [5, +\infty)$ ✓

۳- (۲) $\Delta > 0, S < 0, P > 0$ (الف)

$\Delta > 0: 4(m^2 + 2m + 1) - 4(10m - 20) > 0$

$4m^2 + 8m + 4 - 40m + 80 > 0 \rightarrow 4m^2 - 32m + 84 > 0$

$\frac{4(m^2 + 2m + 1)}{m-2} < 0 \rightarrow \frac{-1}{\pm 1 - 1 \pm}$

سوی دیکھی جارہے ہیں
 $\Delta < 0 \rightarrow$ محذور
 $\Delta > 0 \rightarrow$ محذور

غلط نسبت ہے اشرف یاد رکھیں نہیں دے سکتے ✓

$\frac{10}{m-2} > 0 \rightarrow \frac{1}{\pm 1 - 1 \pm}$

$$S < 0: \frac{P(m+1)}{m-r} < 0 \Rightarrow \frac{-1}{1-1} + \dots \Rightarrow P < 0: \frac{1}{m-r} < 0 \Rightarrow \frac{r}{-1} +$$

الف) $D > 0, P < 0 \rightarrow \frac{b}{m-r} < 0 \rightarrow m < r$ ✓

$$\rightarrow \chi_5 \frac{r}{\frac{r}{\chi_5}} \leq \frac{\frac{r}{\chi_5}}{\frac{r}{\chi_5}} \quad \checkmark$$

$x \neq 1$ man $\left| \begin{array}{l} -\frac{b}{r_a} = \frac{1}{r} \\ y = \frac{r_a}{r} \end{array} \right.$ ext $\left\{ \begin{array}{l} -\frac{b}{r_a} = \frac{1}{r} \\ y = \frac{r_a}{r} \end{array} \right.$

$$ms - \Delta p = V$$

(2) - V

$$s = \frac{m \times 4}{m} \rightarrow \frac{m \times 4}{m} + \frac{1 \times 0}{m} = V \rightarrow \frac{m \times 4}{m} = V \rightarrow m = \frac{V}{4}$$

$$p = \frac{-r}{m} \rightarrow 4x - 4x - 1 = 0 \rightarrow s = \frac{r}{4}, p = -\frac{1}{4}$$

$$\rightarrow s^2 - 2p = \alpha^2 + \beta^2 = \frac{9}{4} + 1 = \frac{13}{4} \quad \checkmark$$

(2) - \Delta

$$x^2 - \Delta x + 1 = 0 \quad s \Delta \rightarrow \alpha + \beta = \Delta$$

$$p = 1 \rightarrow \alpha \beta = 1 \rightarrow \alpha^2 \beta^2 = 1$$

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

$$= \frac{1}{\alpha} (s^2 - 2p) = \frac{1}{\alpha} (1 - 2(1)) = \frac{1}{\alpha} (-1) = -\frac{1}{\alpha} \quad \checkmark$$

$$(1, 1) \quad (-1, 1) \quad (0, 1)$$

(2) - 9

$$ka + mb + c = 1 \rightarrow ka + mb = 1 - c \rightarrow ka + mb = 1 - c \rightarrow a = 1 \rightarrow b = \frac{1-c}{k}$$

$$ka - mb + c = 1 \rightarrow ka = 1 - c + mb \rightarrow ka = 1 - c + mb$$

$$c = 1$$

$$\rightarrow x^2 + 2x + 1 \rightarrow x = \frac{-b}{a} = \frac{-2}{1} = -2 \quad \checkmark$$

۱۰- (۲)

$$2x^2 + (m+1)x + m+45$$

است

$$2x^2 + mx + m+45 \rightarrow \Delta = 0$$

$$\rightarrow m^2 - 4(2m+12) = 0 \rightarrow m^2 - 8m - 48 = 0 \rightarrow (m-12)(m+4) = 0$$

(۱۲)

(-۴) ✓

چون در معیار اول می باشد دلی دیگری در معیار اول نمی باشد.