

Date: ١٠:٥٠ Sub: تالیف شمس الدین

الف) $n^2 - n = 2 \Rightarrow n^2 - n - 2 = 0 \rightarrow \underbrace{n^2 - 1}_{\text{عقبات}}, \underbrace{n = 2}$ (1)

ب) $m = 2 \Rightarrow a = -1 \Rightarrow n = 2$

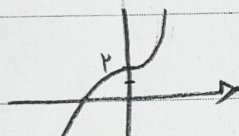
$a = 1 \rightarrow y = 2 \Rightarrow R_f = [2, +\infty)$ (2)

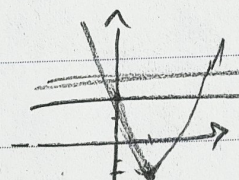
$x + a < 2 \xrightarrow{x < 1} a \leq 1$

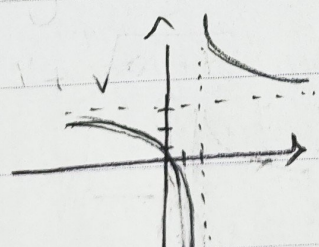
$3n - 1 \xrightarrow{x > 1} 3n > 3 \rightarrow 3n - 1 > 2$ (3)

$an + a - 1 \rightarrow x \leq 0 \rightarrow an \leq 0 \rightarrow an + a - 1 \leq a - 1 \rightarrow a < 0$

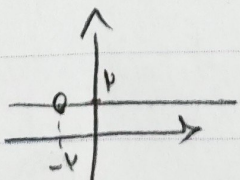
$\textcircled{0} a > 0 \Rightarrow 0 < a < 3$

الف)  $x \leq y^3 + 2 \Rightarrow y \leq \sqrt[3]{x-2}$

ب) $\text{ent} \left| y \leq 2 - 1 + 2 = 2 \right|$  $x \leq y^3 + 2 \Rightarrow y \leq \sqrt[3]{x-2}$

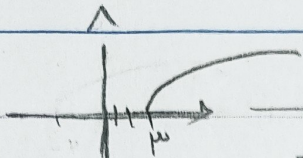
الف)  $x \leq \frac{y^3 + 1}{y - 2} \Rightarrow xy - 2x = \frac{y^3 + 1}{y - 2}$ (4)

$\Rightarrow y(n - 3) = 2n + 1 \Rightarrow y \leq \frac{2n + 1}{n - 3}$

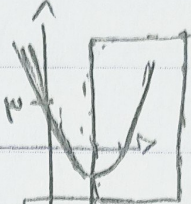
ب) $y \leq 2 \rightarrow$  $x \leq y^3 + 2 \Rightarrow y \leq \sqrt[3]{x-2}$

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(الف)  $x = \sqrt{y - k} \Rightarrow$ ②

$$x^2 = y - k \Rightarrow y^{-1} = x^2 + k, x \geq 0$$

ب) $x = 1, x = k$  $x = \sqrt{y - k} \Rightarrow$

$$x + 1 = (y - k)^2 \Rightarrow y^{-1} = \sqrt{x + 1} + k$$

$x = y + \sqrt{y} \xrightarrow{+1/k} x + \frac{1}{k} = (\sqrt{y} + \frac{1}{k})^2 \Rightarrow \sqrt{x + \frac{1}{k}} = \sqrt{y} + \frac{1}{k} \Rightarrow$ ③

$$\sqrt{x + \frac{1}{k}} - \frac{1}{k} = \sqrt{y} \Rightarrow (\sqrt{x + \frac{1}{k}} - \frac{1}{k})^2 = y \Rightarrow y = \underbrace{(\sqrt{x + \frac{1}{k}} + \frac{1}{k})^2}_{x + \frac{1}{k} + \frac{1}{k} + \frac{1}{k^2}} - \frac{1}{k^2}$$

$$a = 1, b = \frac{1}{k}, c = -\frac{1}{k^2}$$

$$a + 2b + 4c = 1 + 1 - 1 = 1$$

x_1 ④

$$\left. \begin{aligned} \sqrt{x_1^2 - r} &= y \\ \frac{x_1}{\sqrt{x_1^2 - r}} &= y \end{aligned} \right\} \rightarrow \sqrt{x_1^2 - r} = \sqrt{x_2^2 - r} \Rightarrow$$

$$x_1^2 = x_2^2 \rightarrow x_1 = x_2 \rightarrow \text{تأثير يكسب است حيث ما يكسب}$$

$$\hookrightarrow x = \frac{y}{\sqrt{y^2 - r}} \Rightarrow x^2 = \frac{y^2}{y^2 - r} \Rightarrow$$

تأثير در زمان

$$xy^2 - 2x = y^2 \Rightarrow y^2(x - 1) = 2x \Rightarrow y^{-1} = \frac{2\sqrt{x}}{\sqrt{x^2 - 1}}$$

$x = \frac{y}{1 + |y|}$ ⑤

$$\begin{aligned} y \geq 0 &\rightarrow x + xy = y \Rightarrow y(x - 1) = -x \Rightarrow y = \frac{-x}{x - 1} \\ y < 0 &\rightarrow x - xy = y \Rightarrow y(x + 1) = x \Rightarrow y = \frac{x}{x + 1} \end{aligned}$$

$$\Rightarrow f\left(-\frac{r}{\omega}\right) = \left(-\frac{r}{\omega}\right)^2 = -\frac{r}{\omega} \Rightarrow x = \sqrt{y - 1} \Rightarrow y^{-1} = (x + 1)^2 \Rightarrow$$

$$g\left(-\frac{r}{\omega}\right) = \left(\frac{r}{\omega}\right)^2 = \frac{r}{\omega} \rightarrow f\left(-\frac{r}{\omega}\right) + g\left(-\frac{r}{\omega}\right) = -\frac{r}{\omega} + \frac{r}{\omega} = \frac{-r^2}{\omega}$$

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$$y = \sqrt[n]{x-1} \Rightarrow 1^r = f(m) + \sqrt{f(m)}$$

①

$$\sqrt{f(m)} = t \Rightarrow t^r + t - 1^r = 0 \Rightarrow \underbrace{t = -t}_{\text{GUE}}, t = 1^r$$

$$\Rightarrow f(m) = 1 \Rightarrow f(m) = \sqrt[n]{1} = 1$$