

(باید نوشت)

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(۱)

الف) $n^2 - n = 2 \rightarrow n^2 - n - 2 = 0 \rightarrow (n-2)(n+1) = 0$ $n=2, m=3$

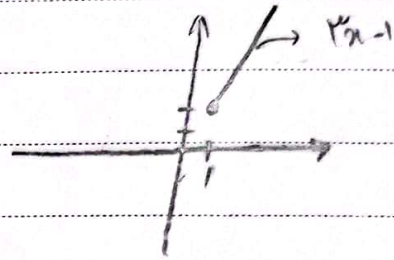
(۵)

ب) $m=2, a=-1, n=2$

$x+a \leq 2$

$1+a \leq 2$

$a \leq 1$

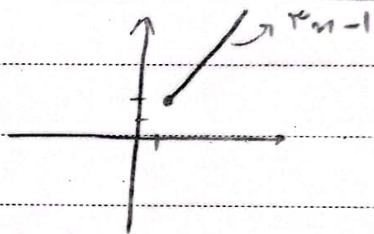


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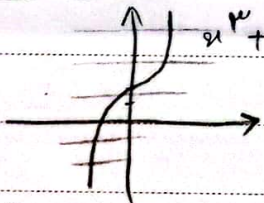
$a > 0$ $\Rightarrow$ $a \leq 1$ $\Rightarrow$ $a \leq 1$

$0 < a \leq 2$ $\Rightarrow$ $a \leq 2 - a - 1 < 2$



(۵) (۲)

الف)



$x = y^2 + 2$

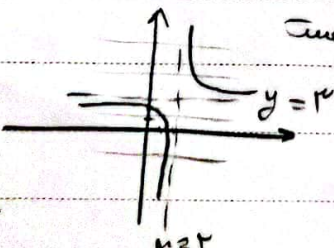
$x - 2 = y^2 \Rightarrow y = \sqrt{x-2} = f^{-1}(x)$

(۴)

ب) $\Rightarrow$ $\frac{2(x+1)}{x+2}$ $\Rightarrow$ $y = 2$ $\Rightarrow$ $\frac{2(x+1)}{x+2} = 2$

(۵)

الف) $\Rightarrow$ $\frac{2(x+1)}{x+2}$ $\Rightarrow$ $y = 2$



باید نوشت

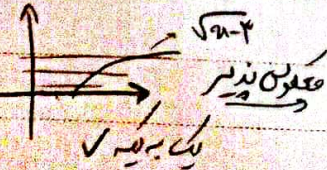
$\Rightarrow f^{-1}(x) = x = \frac{2y+1}{y-2} = x$

(۵) (۴)

$y = -\frac{2x-1}{x-2} = \frac{2x+1}{x-2} = y$

ب) $\frac{2(x+1)}{x+2} \Rightarrow y = 2$ $\Rightarrow$ $\frac{2(x+1)}{x+2} = 2$

الف)



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

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

(۵) (۲)

Graph of $y = \sqrt{x}$ is shown. The curve starts at the origin (0,0) and increases as x increases. The x-axis is labeled with 1, and the y-axis is labeled with 1. The curve passes through the point (1,1).

$$x = y^2 - \varepsilon y + 1 \rightarrow x - 1 = (y^2 - \varepsilon y) + \varepsilon - \varepsilon$$

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

$$\text{Let } x = 1$$

$$f(u) = u + \sqrt{u} \rightarrow y = \overbrace{u + \sqrt{u}}^{\frac{1}{3}} - \frac{1}{3} \quad (V)$$

$$y + \frac{1}{z} = \left(\sqrt{x + \frac{1}{r}}\right)^2 \rightarrow x + \frac{1}{z} = \left(\sqrt{y + \frac{1}{r}}\right)^2 \rightarrow y + \frac{1}{r} = \sqrt{x + \frac{1}{z}}$$

$$2) \rightarrow (\sqrt{y} = \sqrt{x + \frac{1}{x}} - \frac{1}{x})^2 \Rightarrow y = x + \frac{1}{x} + \frac{1}{x} - \sqrt{x + \frac{1}{x}} \quad \text{⑤}$$

$$a=1 \quad b=\frac{1}{r} \quad c=-\frac{1}{3} \quad y=x+\frac{1}{r}-\sqrt{x+\frac{1}{3}}$$

~~$$1 + \cancel{2\left(\frac{1}{2}\right)} + \cancel{2\left(\frac{1}{2}\right)} = 1 \quad (1)$$~~

$$\frac{y_1}{\sqrt{a_1^2 - r^2}} \rightarrow y_1 = y_2 \rightarrow \frac{a_1}{\sqrt{a_1^2 - r^2}} = \frac{a_2}{\sqrt{a_2^2 - r^2}} = \frac{a_1 r}{a_1^2 - r^2} = \frac{a_1 r}{a_2^2 - r^2}$$

$\frac{y^2}{y^2-1} = \frac{x^2}{x^2-1}$

$y^2(x^2-1) = x^2(y^2-1)$

$y^2x^2 - y^2 = x^2y^2 - x^2$

$-y^2 = -x^2$

$x^2 = y^2$

$x = \pm y$

نتیجه نهایی است

$$\frac{a}{1+|a|} = \frac{-r}{\omega}, \quad \omega a = -r - r|a| \rightarrow \omega a + r|a| = -r \quad (9)$$

$$f\left(\frac{-r}{\omega}\right) = \frac{-r}{\mu}$$

$$\begin{cases} \text{if } \omega = v\omega = q \rightarrow a = -\frac{r}{\omega} \bar{\omega} \\ \text{if } \omega = \mu\omega = -r \rightarrow a = \boxed{\frac{-r}{\mu} \bar{\omega}} \end{cases}$$

$$g\left(\frac{-r}{\omega}\right) \Rightarrow \sqrt{a} - 1 = \frac{r}{\omega} \rightarrow \sqrt{a} = \frac{r}{\omega} \rightarrow a = \frac{q}{r\omega} \rightarrow \frac{q}{r\omega} - \frac{r}{r} = \frac{a - \omega}{v\omega} \Rightarrow \frac{\mu}{v\omega}$$

$$f(x) \rightarrow y = \sqrt[n]{x-1} \Rightarrow x = \sqrt[n]{y-1} \Rightarrow x+1 = y \quad (3)$$

$$y(x) = x + \sqrt{x^2 + 1} = \frac{1}{x} \rightarrow x = 1$$