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روزنامه‌های ... یازدهم ... تلفات ۱۰

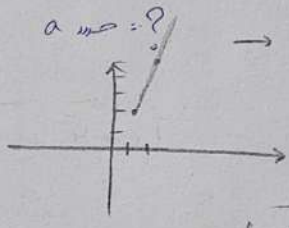
الف) $E = \{(2, 2), (1, 5), (3, 2), (n, 2), (-1, 4)\}$
 $n^2 - n - 2 = 0$
 $(n-2)(n+1) = 0$
 $n = 2$

فرض کنیم $n=2$ → ...
 $\frac{2}{2} = 1$
 $\frac{2}{2} = 1$

ب) $E = \{(-1, 1), (1, 2), (2, 3), (x, y), (y, x)\}$
 $(x, y) = (2, 3)$
 $(y, x) = (3, 2)$

$\frac{2}{2} = 1$

$f(x) = \begin{cases} x^{n-1} & x \geq 1 \\ n+a & x < 1 \end{cases}$



$x^{n-1} \xrightarrow{n=1} x^{1-1} = x^0 = 1 = y$

...
 $n+a = 2$
 $a = 2 - n$

$(-\infty, 1] = \text{...}$

$f(x) = \begin{cases} x^{n-1} & x \geq 1 \\ n+a-1 & x < 1 \end{cases}$

$n+a-1 < 2 \xrightarrow{n=0} a-1 < 2 \quad a < 3$

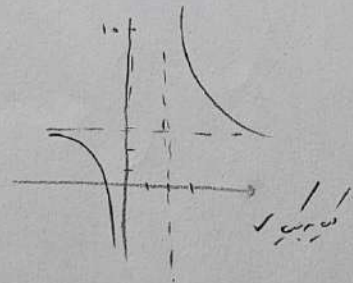
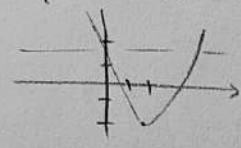
$a < 3$

الف) $y = x^2 + 2$

ب) $y = x^2 - 2x + 2$

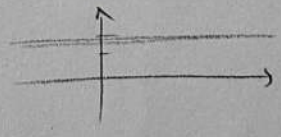
$x = y^2 + 2$

$x_5 = \frac{7x}{2} = 2 \quad y_5 = x - 1 + 2 = -1$



الف) $y = \frac{x+1}{x-2}$

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



$\frac{c}{a} = 3$

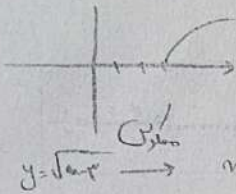
$n-2 = 0 \quad n = 2$

$n = 2 \rightarrow \frac{1}{1} = 1$

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

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

الف) $y = \sqrt{n-r}$



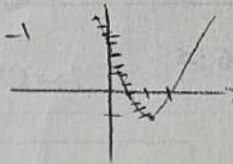
$y = \sqrt{n-r} \rightarrow n = \sqrt{y-r}^2$

$n^2 = y-r \rightarrow \boxed{n^2 + r = y}$

ب) $y = n^2 - 2n + r$ $n \in [r, +\infty)$

$n_0 = \frac{-b}{2a} = \frac{2}{2} = 1$

$y = 1 - 2 + r = -1$



$y = (n-r)^2 + 1 \Rightarrow n = (y-r)^2 + 1$

$\boxed{\sqrt{n+1} + r = y}$

مع Cbb $\rightarrow f(n) = n + \sqrt{n}$ $\Rightarrow (-, +\infty) \Rightarrow f(n)^{-1} = an + b - \sqrt{n-c}$

$a+r+b+r_c = ? \rightarrow f(n)^{-1} \Rightarrow n = y + \sqrt{y} \left(+\frac{1}{2} - \frac{1}{2} \right) = \left(\sqrt{y} + \frac{1}{\sqrt{y}} \right)^2 - \frac{1}{y} = n$

$\sqrt{n + \frac{1}{2}} - \frac{1}{\sqrt{2}} = \sqrt{y} \rightarrow y = n + \frac{1}{2} + \frac{1}{2} - \sqrt{n + \frac{1}{2}} = n + \frac{1}{2} - \sqrt{n + \frac{1}{2}}$

$1 + \frac{r}{y} + \frac{r}{y} + \frac{r}{y} = 1$

$\boxed{a=1} \quad \boxed{b=\frac{1}{r}} \quad \boxed{c=-\frac{1}{2}}$

$y = \frac{n}{\sqrt{n^2-r}}$

$y = \frac{n_1}{\sqrt{n_1^2-r}}$

$\frac{n_1}{\sqrt{n_1^2-r}} = \frac{n_r}{\sqrt{n_r^2-r}}$

$\frac{n_1^2}{n_1^2-r} = \frac{n_r^2}{n_r^2-r}$

$\Rightarrow \frac{n_1^2}{n_1^2-r} - \frac{n_r^2}{n_1^2-r} = \frac{n_1^2}{n_1^2-r} - \frac{n_r^2}{n_1^2-r} \Rightarrow n_1 = \pm n_r \rightarrow$

$n = \frac{y}{\sqrt{y^2-r}} \rightarrow n^2 = \frac{y^2}{y^2-r} \rightarrow y^2 n^2 - r n^2 = y^2 \rightarrow y^2 (n^2 - 1) = r n^2 \rightarrow y^2 = \frac{r n^2}{n^2 - 1}$

$y = \pm \sqrt{\frac{r n^2}{n^2 - 1}} \rightarrow y = \frac{n \sqrt{r}}{\sqrt{n^2 - 1}}$

$f(n)^{-1} = \frac{n}{1+|n|}$

$g(n) = \sqrt{n} - 1$

$f\left(-\frac{r}{a}\right) + g\left(-\frac{r}{a}\right) = 9 = -\frac{r}{r} + \frac{9}{r} = \frac{-r+9}{r} = \frac{-r}{r} = -1$

$f(n) \rightarrow n = \frac{y}{1+|y|} = n + n|y| = y \frac{y}{1+|y|} \rightarrow y = \frac{n}{1-n} = f(n)$

$y(1+n) = n \rightarrow y = \frac{n}{1+n} = f(n)$

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

$f\left(-\frac{r}{a}\right) = \frac{-\frac{r}{a}}{1+\frac{r}{a}} = \frac{-r}{a+r}$

$n+1 = \sqrt{y} \rightarrow n^2 + 1 + r = y = (n+1)^2 \rightarrow g(n)^{-1} = (n+1)^2 \rightarrow \left(\frac{r}{a}\right)^2 = \frac{r}{a}$

$$f(n)^{-1} = \sqrt[n]{n-1}$$

$$n = \sqrt[n]{y-1}$$

$$n^p + 1 = y = f(n)$$

$$g(n) = f(n) + \sqrt[n]{f(n)}$$

$$g(n) = n^p + 1 + \sqrt[n]{n^p + 1}$$

$$g(n) = n = y^p + 1 + \sqrt[y^p + 1]{y^p + 1} \left(+ \frac{1}{2} - \frac{1}{2} \right)$$

$$n = \left(\sqrt[y^p + 1]{y^p + 1} + \frac{1}{2} \right)^p - \frac{1}{2}$$

$$\sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} - \frac{1}{2} = \sqrt[y^p + 1]{y^p + 1} \rightarrow n + \frac{1}{2} + \frac{1}{2} = \sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} = y^p + 1$$

$$\sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} - \sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} - 1 = y \xrightarrow{(12)}$$

$$\sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} - \sqrt[n + \frac{1}{2}]{n + \frac{1}{2}} - 1 = \sqrt[n - \frac{1}{2}]{n - \frac{1}{2}} - \sqrt[n - \frac{1}{2}]{n - \frac{1}{2}} = \sqrt[n - 2]{n - 2} = \sqrt[n]{n} = 2$$

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