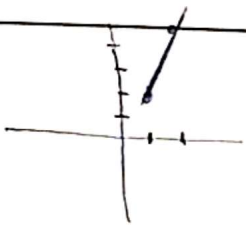


و نام خانوادگی حتی مسدود پاسخنامه تشریحی تکلیف شماره 1. کلاس A

ا) $(3, 2), (m, 2) \rightarrow \overline{m=3} / (3, n^2-n), (n, 5), (3, 2), (-1, 6)$

$n^2-n \neq 2 \quad n^2-n=2 \rightarrow (n-2)(n+1)=0$
 $\overline{n=2} \quad \hookrightarrow \quad n=-1$ ۲

ب) $m=2, (a, 1), (-1, 1) \sim a=-1 \sim (a+2, n), (1, 2) \rightarrow \overline{n=2}$



$x+a \sim \cdot \text{نیست} \cdot \checkmark$
 $a+1 \leq 2 \rightarrow a \leq 1$ ۳

$\begin{cases} 2n-1, & n \geq 1 \\ a+n-1, & n \leq 0 \end{cases}$

$\rightarrow \frac{a}{\text{د}} > 0, \quad a-1 < 2 \rightarrow a < 3$ ۴

$\text{د} \cap \text{د} \rightarrow a < 3$



$\checkmark \text{د} \sim y = x^2 + 2 \xrightarrow{\text{د}} y^3 = x - 2 \rightarrow y = \sqrt[3]{x-2}$



ا) $\frac{3n+1}{2x} = y$ ۵
 $\rightarrow y(\lambda-2) = 2n+1 \rightarrow y' = \frac{2n+1}{\lambda-2}$

$a=2 \sim 1$
 $\checkmark \text{د} \sim \lambda = \frac{3y+1}{y-2} \rightarrow \lambda(y-2) = 3y+1$
 $\lambda y - 2\lambda = 3y+1$

ب) $\frac{3+2n}{n+2} \rightarrow n = -1$ ۵
 $\sim \frac{2(2+n)}{3+2} \sim \checkmark \text{د}$

و ۱)

$$\sqrt{x-3} \rightarrow y = \sqrt{x-3} \xrightarrow{y^2} x = y^2 + 3$$

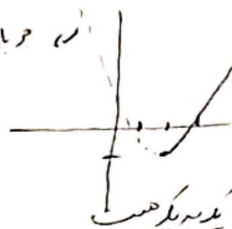
$$\xrightarrow{y^2} x^2 = y - 3 \rightarrow y = x^2 + 3$$

5

$$y = (x-1)(x-3)$$

$$x \in [3, +\infty)$$

در این صورت



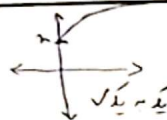
$$y = x^2 - 4x + 3 + 1 - 1$$

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

$$\sqrt{y+1} = |x-2|$$

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

6



$$f(x) = x + \sqrt{x} \xrightarrow{y = x + \sqrt{x}} \frac{y + \sqrt{y}}{2} - \frac{1}{2} = y$$

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

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

$$ax + b - \sqrt{x-c} \rightarrow a=1, b=\frac{1}{2}, c=-\frac{1}{2} \rightarrow 1 + 1 + 2(-\frac{1}{2}) = 1$$

7

$$y = \frac{x}{\sqrt{x^2-1}} \sim \frac{x_1}{\sqrt{x_1^2-1}} = \frac{x_1}{\sqrt{x_1^2-1}} \xrightarrow{y} \frac{x_1}{x_1^2-1} = \frac{x_1}{x_1^2-1} \rightarrow x_1^2 x_1^2 - x_1^2 = x_1^2 x_1^2 - x_1^2$$

$$\rightarrow x_1^2 = x_1^2 \rightarrow x_1 = x_1 \rightarrow \frac{y}{\sqrt{y^2-1}} = x \rightarrow y = \pm \sqrt{\frac{y x^2}{x^2-1}} = \pm \frac{\sqrt{y} x}{\sqrt{x^2-1}}$$

این هم علامت بی نهایت است

1,75

8

$$\frac{f(x)}{y} = \frac{x}{1+x} \sim y = \frac{x}{1+x} \sim x \rightarrow \frac{x}{1-x} = y \rightarrow \omega x = -2 + 2x$$

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

$$g^{-1}(-\frac{1}{2}) \sim (-\frac{1}{2} + 1)^2 = \frac{1}{4}$$

$$\frac{9}{10} + \frac{1}{10} = \frac{10}{10}$$

1,75

9

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

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

$$x = \sqrt{y-1} \sim 9 \sqrt{9}$$

5

10