

A. 2.11

14

اسماء

$$\begin{aligned} n \rightarrow 0 & \Rightarrow f(1) \circ f(1) = f(1) \rightarrow b = 0 \\ n \rightarrow 1 & \Rightarrow f(0) \circ f(1) = 0 \\ n \rightarrow 2 & \Rightarrow f(1) \circ f(1) = 1 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} f(n) \circ x$$

(1)
(2)

$$\Rightarrow \sqrt{n} \circ x \Rightarrow \frac{1}{\sqrt{a}} = \frac{1}{\sqrt{e}} \Rightarrow R = [0, \frac{1}{\sqrt{e}}]$$

$$\frac{n!}{n!} = \frac{n(n-1)(n-2)\dots(1)}{n!}, \quad n! \circ x \Rightarrow Df = R = \{-1, 1\}$$

(2) (1)

$$Rf = [1, +\infty) \cup \{1\} \Rightarrow \frac{a \circ b}{c} = \frac{1}{-1} = -1 \Rightarrow f(-1) = (1)$$

(3)
(2)

$$\sqrt[n]{(n-1)^n} = \sqrt[n]{n^n \cdot \frac{n-1}{n}} \Rightarrow Df = [-1, 1]$$

$$\Rightarrow y \circ n-1 \Rightarrow R \neq [-1, 1]$$

$$Dy = R = \{1\} \Rightarrow Dy = R = \{1\} \cdot R \left\{ \frac{a}{c} \right\} = \underline{a=1}$$

(1)
(1)

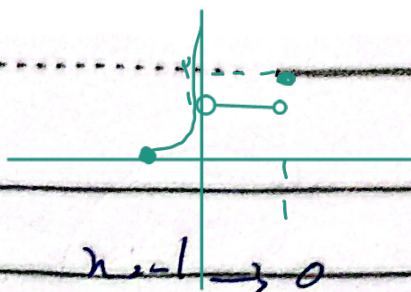
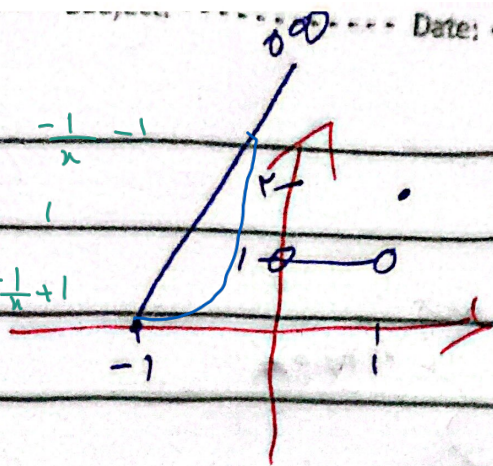
$$\Rightarrow \frac{n!}{n!} = 1, \quad n! \circ b = n! \cdot 1 \Rightarrow b = 1$$

$$-a \circ b = 0$$

$$Df = [-1, 1] \quad \frac{n+1}{1-n} > 0 \quad \frac{-1}{-1+1} =$$

$$\begin{aligned} n \rightarrow 0 & \rightarrow -\frac{1}{1} = -1 \rightarrow b < 1 \rightarrow a+b < 1 \\ n \rightarrow \infty & \rightarrow \frac{1}{n} < 1 \rightarrow a < 1 \end{aligned}$$

$$\begin{cases} -1 \leq x < 0 & -\frac{1}{x} - 1 \\ 0 \leq x < 1 & 1 \\ x = 1 & +\frac{1}{x} + 1 \end{cases}$$



①
(a)

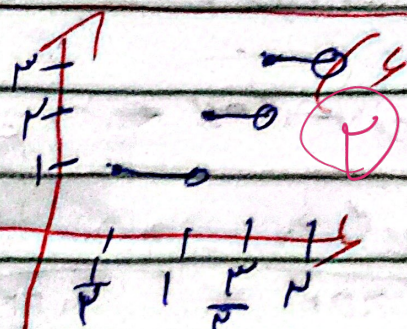
$$\begin{aligned} x \rightarrow 0 & \rightarrow 0 \\ x \rightarrow \infty & \rightarrow \infty \\ x \rightarrow 1 & \rightarrow \infty \end{aligned}$$

$$\left[\frac{1}{x}, 1\right) \rightarrow 1$$

$$\left[1, \frac{1}{x}\right) \rightarrow \infty$$

$$\left[\frac{1}{x}, \infty\right) \rightarrow \infty$$

بخش ۱ و ۲



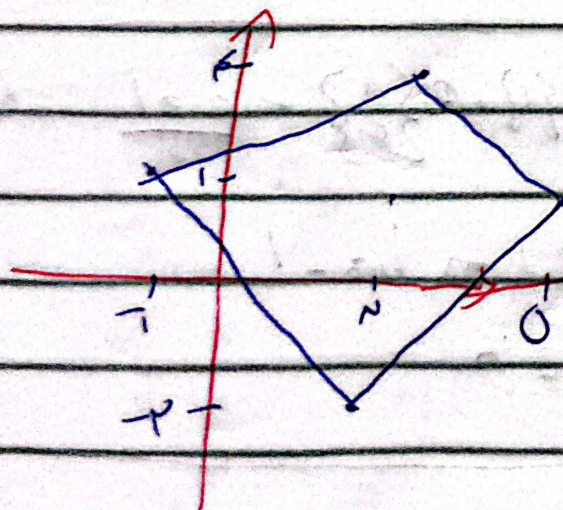
②

$$|c| < |d| \rightarrow (c+d)(c+d) < 0$$

$$(a+x+\varepsilon)(-a+x-\varepsilon) < 0$$

$$a < 1 \rightarrow (x+\varepsilon)(-x) < 0 \quad x > -\varepsilon \quad b < -\varepsilon \quad \boxed{a-b < \varepsilon}$$

$$a < -1 \rightarrow \varepsilon(x-\varepsilon) < 0 \quad x < \varepsilon$$



$$x \rightarrow 0 \rightarrow -\infty$$

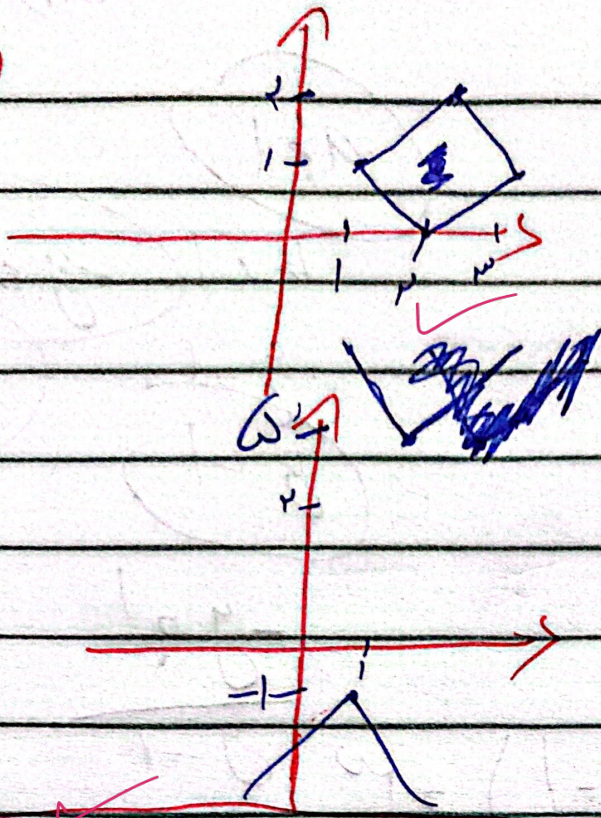
$$x \rightarrow 1 \rightarrow \infty$$

$$x \rightarrow \infty \rightarrow \infty$$

$$x \rightarrow -\infty \rightarrow -\infty$$

③

④



$$\begin{aligned} \frac{nx}{a} &\rightarrow (p \circ a)nx \rightarrow b \\ \frac{ny}{a} &\rightarrow (p \circ a)ny \rightarrow b \end{aligned}$$

$$\begin{aligned} p \circ a \rightarrow a \rightarrow p \\ p \circ a \rightarrow a \rightarrow p \end{aligned} \Rightarrow a \rightarrow p$$

$$\begin{aligned} p \circ a \rightarrow a \rightarrow p &\Rightarrow a \rightarrow p \\ p \circ a \rightarrow a \rightarrow p &\Rightarrow a \rightarrow p \end{aligned}$$

$$a \rightarrow (-p, p)$$