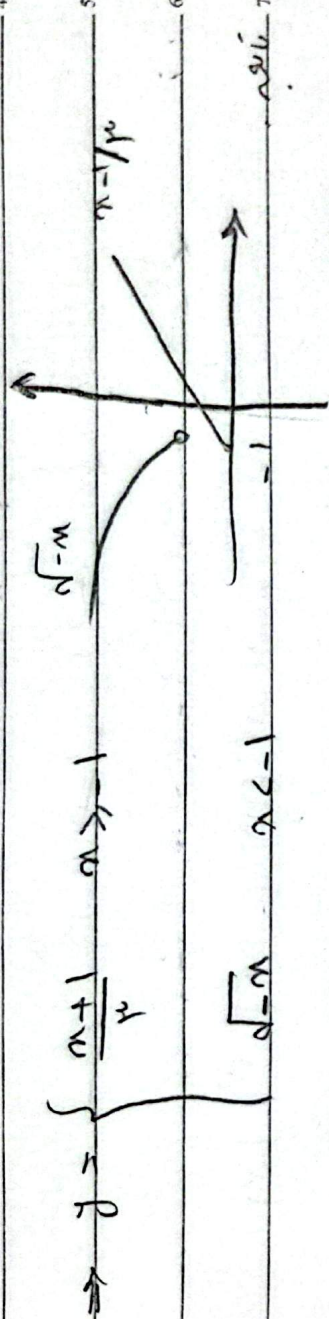


Bis positive, negative

$$x = \begin{cases} x^y - 1 & y > 0 \Rightarrow x^y - 1 > -1 \Rightarrow x > -1 \\ -y^x & y < 1 \Rightarrow x < -1 \end{cases} \quad (1)$$



$$g(x) = \left| \frac{x f(n-r)}{f(n)} \right| \rightarrow \frac{x f(n-r)}{f(n)} > 0 \quad (2)$$

$$x=0, f(n) > 0 \Rightarrow -\infty, x, 0 \quad f(n-r) > 0 \Rightarrow -\infty, x, 0 \quad \text{and} \quad \text{positive} \quad (3)$$

$$- \frac{\infty}{0} + \frac{0}{0} + \frac{0}{0} - \frac{0}{0} - \frac{0}{0} + \frac{0}{0} \rightarrow D: (-\infty, r] \cup [0, x) \cup [x, +\infty) \quad (4)$$

$$\text{الف) } x^y - x^m \neq 0 \rightarrow x(x^y - x^m) \neq 0 \quad D: R - \{0, y, x\} \quad (5)$$

By using the rule

$$\text{ب) } \frac{x^y - x^m + x}{x^y - x^m} > 0 \rightarrow \frac{x^y - x^m + x}{x^y - x^m} > 0 \quad D: (-\infty, 0) \cup (x, +\infty) \quad (6)$$

$$\text{الف) } \frac{x^y - x^m}{x^y - x^m} > 0 \rightarrow \frac{x^y - x^m}{x^y - x^m} > 0 \quad (7)$$

$$\frac{x^y - x^m}{x^y - x^m} \rightarrow \frac{x^y - x^m}{x^y - x^m} \rightarrow x^y = x^y \quad (8)$$

Genobar

الف) ادفع :
$$\frac{-2}{-1} + \frac{2}{1} +$$

$$\Rightarrow D_p = (-2, 2) \cup (2, +\infty) \quad (11)$$

2

ب)
$$x^2 - x \neq 0 \Rightarrow x(x-1) \neq 0 \Rightarrow x \neq 0 \text{ و } x \neq 1$$

3

د)
$$D_p = (-2, 2) \cup (2, +\infty)$$

4

هـ)
$$x(x^2-1) > 0 \Rightarrow x(x-1)(x+1) > 0 \Rightarrow \frac{-1}{+} \frac{0}{+} \frac{1}{+}$$
 (12)

7

8.
$$|x+1| > 0 \Rightarrow x > -1 \Rightarrow D_p = [-1, +\infty)$$

ب)
$$|x-1| \neq 0 \Rightarrow x \neq 1$$

9

10.
$$|x-2| - x^2 > 0 \Rightarrow \frac{x-2}{x^2} > 0 \Rightarrow x-2 > 0 \Rightarrow x > 2$$
 هو موجب

10

11.
$$\frac{-2}{+1} + \frac{2}{-1} +$$

$$\Rightarrow x-1-x^2 > 0 \Rightarrow (x-1)(x+1) < 0$$

11

$$D_p = (-1, 1) \cup (1, +\infty)$$

12

13.
$$(x-2)(x-2) > 0 \Rightarrow x < 2$$
 (14)

15.
$$x=2 \Rightarrow x < 2 \Rightarrow D_p = [2, +\infty)$$

15

16.
$$|x-1| - x^2 > 0$$

16

17.
$$x^2 - x < 0 \Rightarrow x(x-1) < 0 \Rightarrow \frac{1}{-} \frac{0}{+} \frac{1}{+}$$

17

(1)
$$D_p = [0, 1]$$

18

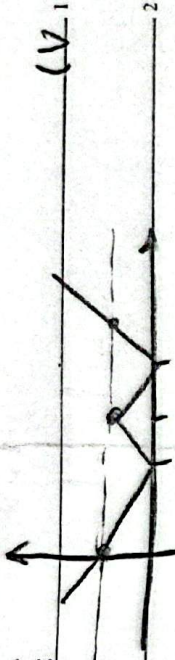
19

20

21



$$|n-r| = 1 \neq k \rightarrow k \text{ line}$$



$$g(x, y) = k \text{ boundary}$$

K is constant

$$\frac{x^r + y^r + r}{x^r + y^r + r} \rightarrow m \neq -1, \frac{r}{r} = 1$$

$$\frac{x^r + y^r + r}{x^r + y^r + r} = \frac{r-1}{r+1} \rightarrow m \neq -1 \rightarrow n \leq r$$

$$\frac{r-1}{r-1} \rightarrow m \neq 1 \quad x^r - y^r + 950 = (x-y)^r \text{ (if } r \text{ is odd)}$$

$$\textcircled{1}: x+1 > 0 \rightarrow x > -1$$

$$x+1 \neq 1 \rightarrow x \neq 0$$

$$\textcircled{2}: x \neq 1 \rightarrow (0, 1) \text{ and } 1$$

$$x > 0$$

$$\textcircled{3}: dy^{1/r} > 0 \rightarrow \frac{1}{r} > 0 \rightarrow dy^{1/r} > 0 \rightarrow x < 1$$

$$-1 \leq x^r - 1 \leq r \rightarrow -1 \leq x^r \leq r \rightarrow x^r \in [r, -1]$$

$$\frac{r}{r} \leq x \leq \frac{r}{r} \rightarrow r \in \left[\frac{r}{r}, \frac{r}{r} \right]$$