

$$f(x) = x^r + x^{r+1} + x^{r+2} + \dots + x^{r+n} \quad (1)$$

$$m + 1 + x^r - x^{r+1} + x^{r+2} - \dots + x^{r+n} = f(x) \rightarrow m = -1, n = r$$

$$g(x) = \{ (f, m) (n, p+1) (p+r, -1) (q, p+k) \}$$

$$\Rightarrow m = p+1, -1 = p+1 \Rightarrow p = -2$$

$$-1 = -1 \Rightarrow p+k = -1 \Rightarrow k = 1$$

$$\frac{m+n+p+k}{-1+2+1+1} = -1 \quad \checkmark$$

ب))

$$\sqrt{\frac{x^r - r}{x^r - rx^r - 1}}$$

$$f-r \cdot n \Rightarrow (f-r)(f+r) = -$$

$$f = r, -r \Rightarrow x^r = r, n = f-r$$

$$\frac{r}{2} + \frac{r}{2}$$

$$(-r, r) \cup (r, +\infty) \quad \checkmark$$

ج))

$$\frac{rx^r + 1}{r - r[x-x]}$$

$$\Rightarrow \Sigma = r[-x] \neq 0$$

$$[x] \in r$$

$$r, (x \in r) \Rightarrow r(x \in -r)$$

$$DP = R - [-r, -r] \quad \checkmark$$

$$\sqrt{x(x^r - 1)}$$

$$x(x^r - 1) \geq 0$$

$$\frac{-1 \pm \sqrt{1-4}}{2}$$

$$\Omega = DP \quad (2)$$

$$\sqrt{|x| + x}$$

$$|x| + x \geq 0$$

$$\rightarrow \mathbb{Z}^+$$

$$\frac{1}{2} \sqrt{x}$$

$$\sqrt{|x-r| - x^r}$$

$$|x-r| - x^r \geq 0$$

$$\frac{-x^r + x - r}{x^r - x^r - x + r} \geq 0 \rightarrow -0 \text{ هوار}$$

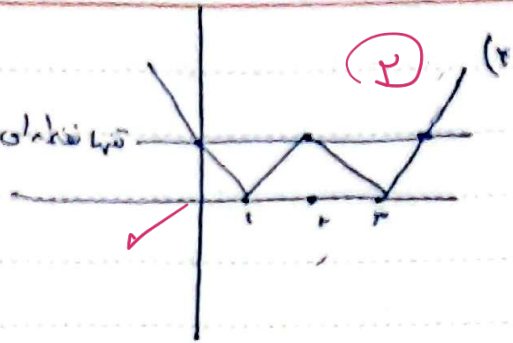
$$|x| - 1 \neq 0 \Rightarrow x \neq \pm 1$$

$$[-r, -1) \cup (-1, 1) = DP \quad \checkmark$$

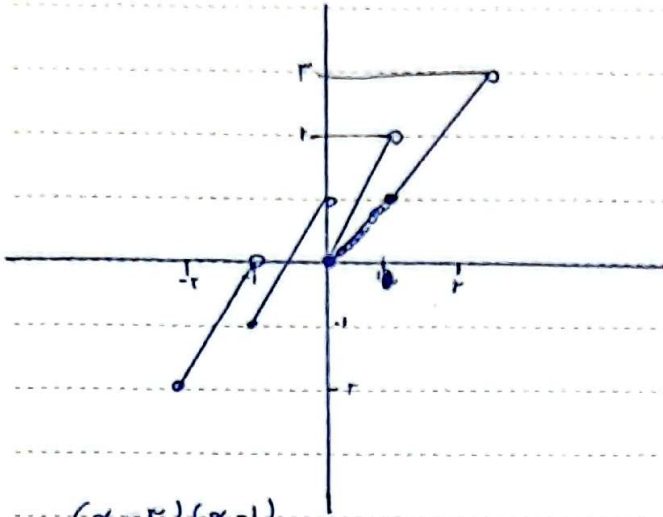
$$||x-2|-1|-k \neq 0 \quad | |x-2|-1| \neq k$$

$$k=1$$

شکل نمودار می باشد



(1) ضایعه ها و بازه نبری ها را بنویس!



$$(x-2)/(x-1)$$

$$\frac{x^2 - 2x + 2}{x+1} + b$$

$$\begin{aligned} x+a &= x-1 \Rightarrow a=-1 \\ b &= 2 \\ x+a &= x-1 \Rightarrow a=-1 \\ b &= 1 \end{aligned}$$

(2) جواب: -2

جواب: -2

$$f(x) = \frac{1+1-x-x}{x} = \frac{1x}{x} = 1 \quad x=2 \quad \text{راه حل با عدد گذارت}$$

$$g(x) = x+c \quad x+c=2 \Rightarrow c=2$$

$$g(1) = f(1) = 2 \quad \frac{a+2}{1+b} = 2 \quad a+2 = 2+2b = a-2b=1$$

$$g(-1) = f(-1) = 1 \quad \frac{-a+2}{-1+b} = 1 \quad -a+2 = -1+b \quad 3a+3b=9 \quad 3a=1$$

$$a=2, b=0 \quad P=a+b$$

$$a+b=2 \quad \checkmark \quad \text{سوال } b+c \rightarrow b+c=2+1=3$$

$$g(x) = \sqrt{\frac{1}{2}x} + 2x$$

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

$$f \cdot g(1) = a \quad 2x - 1 - 2x = a$$

$$-1 - 1 = a \Rightarrow 2x = -1 \Rightarrow x = -\frac{1}{2}$$

$$f \cdot g(1) = 1 \Rightarrow -1 \Rightarrow -1$$

$$m = v \Rightarrow \text{isobaric} \Rightarrow f(x) = \sqrt{v \cdot x} + n$$

$$g(x) = \sqrt{v \cdot x} + r$$

$$f \cdot g(r) = 4\sqrt{r} \quad r + n - r\sqrt{r} = 4\sqrt{r} \Rightarrow r + n = 4\sqrt{r}$$

$$n = 4\sqrt{r} - r, \quad m = v$$

$$m + n = 4\sqrt{r} + v + 4\sqrt{r} - r \Rightarrow 8\sqrt{r} + v - r = m + n$$



isobaric (1)

(2)