

$$f(x) = \begin{cases} 2x-1 & x \geq 0 \\ 2x+3 & x < 0 \end{cases}$$

(۲)

$$\frac{2x+3}{x} \geq \epsilon$$

$$2x+3 \geq \epsilon x$$

$$2x \geq \epsilon x - 3$$

$$x \geq \frac{\epsilon x - 3}{2}$$

$$x < 0 \Rightarrow -\frac{3}{2} \leq x < 0$$

$$\left. \begin{array}{l} x > 0 \\ x \geq 0 \end{array} \right\} \Rightarrow x \geq 0$$

$$\textcircled{1} \cap \textcircled{2} \Rightarrow \left[-\frac{3}{2}, +\infty\right)$$

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$$\frac{3(1x^3 + 1x^2 + 1x + 1)}{(2x+1)^2}$$

$$\Rightarrow D_f = \mathbb{R} - \left\{-\frac{1}{2}\right\}$$

$$2x+1 \neq 0$$

$$x \neq -\frac{1}{2}$$

$$\frac{2 \cdot 2x^3 + 3 \cdot 2x^2 + 1 \cdot 2x + 3}{(2x+1)^2} = \frac{4x^3 + 6x^2 + 2x + 3}{4x^2 + 4x + 1}$$

$$\frac{4x^3}{4x^2}$$

$$\frac{6x^2}{4x^2}$$

$$\frac{2x}{4x^2}$$

$$\frac{3}{4x^2}$$

$$4x^3 - \frac{1}{4} = -1x$$

$$6x^2 - \frac{1}{4} = -1x$$

$$2x - \frac{1}{4} = -1x$$

$$3 - \frac{1}{4} = -1x$$

$$\Rightarrow 4x^3 + 6x^2 + 2x + 3 = 4(x^3 + \frac{3}{2}x^2 + \frac{1}{2}x + \frac{3}{4})$$

$$4(x^3 + \frac{3}{2}x^2 + \frac{1}{2}x + \frac{3}{4})$$

$$(2x+1)^2$$

$$= \frac{4x+3}{2x+1}$$

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

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

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

$$x=0 \Rightarrow \left. \begin{aligned} f(a) &= \frac{-r}{-1} = r \\ g(r) &= c \end{aligned} \right] \Rightarrow c=r$$

(r) - r

$$x=1 \Rightarrow g(a) = r$$

$$r = \frac{a+r}{b+1}$$

$$x=-1 \Rightarrow g(r)=1 \quad 1 = \frac{r-a}{b-1} \Rightarrow b-1 = r-a$$

$$a = r-b$$

$$\frac{a-b}{b+1} = r \Rightarrow rb + r = a - b$$

$$b = r$$

$$b = \frac{r}{r}$$

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

0 - r

$$x=0 \Rightarrow \frac{-1}{c} = \frac{-1}{b} \Rightarrow c=b$$

(r)

$$x^r + ax + b = (x-c)^r = x^r - rax + c^r$$

$$b = c^r, b=c \Rightarrow b, c=1$$

$$a = -rc = -r$$

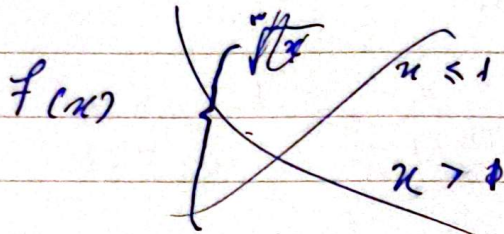
$$1+1-r=0$$

$$\frac{x}{1} = \frac{x}{1}$$

dh

$$(x-1)^2 x + (x+1)^2 (-x) = \quad \text{--- 0}$$

$$x((x-1)^2 - (x+1)^2) = -1x \times x = -1x \quad \checkmark$$



$$1 - 2x = 0$$

$$-2 = 2x$$

$$x = -1 \Rightarrow$$

$$\sqrt{-1} + 1 = 1 \quad \checkmark$$

$$1 - 2x = -1$$

$$x = 1 \Rightarrow \sqrt{1} = 1 \quad \checkmark$$

$$x + 1 = 1 \quad \checkmark$$

$$x + \sqrt{x} = 4$$

$$t^2 + t - 4 = 0$$

$$(t+4)(t-1) \Rightarrow t = -4 \times$$

$$t = 1 \quad \checkmark$$

$$\sqrt{x} = 1$$

$$x = 1 \quad \checkmark$$

$$x + x \cdot x = 2 \cdot 4 + 1 \cdot 1 = 9$$

$$x = 4 \quad \checkmark$$

$$(x-1)^2 + (x-1) + (1-x)^2 + (1-x)$$

$$(x-1)^2 - (x-1)^2 + (x-1) - (x-1) = 0 \quad \checkmark$$

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۹- دایره مشترک ۱

$$2\sqrt{\varepsilon - 3a} + 2k - 2 - \sqrt{b - \varepsilon} - 3k - 1 = 0 \quad (۲)$$

صورت زیر را، اینجا باید فرض شود.

$$\sqrt{b - \varepsilon} = 0 \Rightarrow b = \varepsilon$$

$$\sqrt{\varepsilon - 3a} = 0 \Rightarrow a = \frac{\varepsilon}{3}$$

$$2k - 3k - k - 2 = 0$$

$$-2k = 2 \\ k = -1$$

$$2a \frac{\varepsilon}{3} - \frac{\varepsilon}{3} + 1 = 0 \quad (۳)$$

$$x + y \geq 0 \\ x \geq -1$$

$$D_f = [-1, y]$$

$$m - x \geq 0$$

$$\left. \begin{matrix} m \geq x \\ y \geq x \end{matrix} \right\} \Rightarrow m = y$$

$$g(x) = \sqrt{4 + x} = 2\sqrt{x}$$

$$f(x) = 2\sqrt{x} = 4\sqrt{x}$$

$$f(x) = 1\sqrt{x}$$

$$\sqrt{y - \frac{10}{x}} + n = 1\sqrt{x}$$

$$n = 1\sqrt{x} - \sqrt{y - \frac{10}{x}}$$

$$n + m = 1\sqrt{x} - \sqrt{y - \frac{10}{x}} = \boxed{1\sqrt{x} + 0}$$

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