

۱۷, ۲۵

تعیین نمودن

طرحس یا رد در جدول

همه در تمام حاد است. ...

$$f(x+1) = \left(\frac{1}{x}\right)^{x+1-2} - 1 = \left(\frac{1}{x}\right)^x \times 2 - 1 \rightarrow f(x+1) \geq 0 \rightarrow \left(\frac{1}{x}\right)^x \geq \frac{1}{2} \Rightarrow x \leq 1$$

$$x^2 \geq 0 \rightarrow x \geq 0 \Rightarrow \frac{0}{-1+1-1} \Rightarrow D = [0, 1]$$

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$$f(-x) = \sqrt{-x + |2-x|} \rightarrow -x + |2-x| \geq 0$$

$$\rightarrow -2x + 2 \geq 0, -2x \geq -2 \Rightarrow x \leq 1$$

$$\Rightarrow D_f = (-\infty, 1]$$

$$\begin{array}{l} -x-2+2 \\ = -2x+2 \end{array} \quad \begin{array}{l} 2 \\ -x-2+x \\ = -2 \end{array}$$

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$$f(x) \neq 0 \Rightarrow x \neq \{-1, 2, 3\}$$

$$x-1 \leq 0 \Rightarrow x \leq 1$$

$$D = (-1, 1] \cup (2, 3)$$

x	-1	1	2	3
f(x)	+	0	-	-
x-1	-	-	0	+
y	-	+	-	+

همین قبل از ۵ - ۱۶
تقریب شده است

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$$y_1 = \frac{1}{(9x^2 - v)x^2 - 6x - \frac{v}{9}}$$

$$y_1 = \frac{1}{cx^2 + ax + b}$$

$$\rightarrow \sqrt{-(a+b)} = \sqrt{-(-v)} = \sqrt{v}$$

$$r_2^2 - u - r^2 = r_2^2 + ax + b \rightarrow a = -1, b = -r^2 \quad \sqrt{-(a+b)} = r$$

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$$y = \sqrt{x^2 + x - \left(\frac{r}{2}\right)^2 - \frac{r}{2}} \geq 0 \rightarrow (x - \frac{r}{2})(x^2 + (\frac{r}{2})^2 + r) + x - \frac{r}{2} \geq 0$$

$$\rightarrow (x - \frac{r}{2})(x^2 + (\frac{r}{2})^2 + r) + x - \frac{r}{2} \geq 0$$

$$(x - \frac{r}{2})(x^2 + (\frac{r}{2})^2 + r) \geq 0 \quad \frac{(a!r)(a!r+4)}{a^2} \geq 0$$

$$D_f = [-r, 0] \cup [r, +\infty)$$

$$* x - \frac{r}{2} \geq 0 \rightarrow \frac{-r}{+} - \frac{r}{+} +$$

$$\Rightarrow D = \mathbb{R} - (-r, r)$$

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$$\frac{-r}{-r+} - \frac{r}{-r+}$$

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$$x^2 + x = x(x^2 + 1) \begin{cases} \rightarrow = r \rightarrow x = 1 \\ \rightarrow = 1 \rightarrow x = r \end{cases}$$

$$\Rightarrow f(r) + f(1) = r(1) - 1 + r(r) - 1 = 1 + r = 1$$

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$$g(x) = x^2 + 9x^2 + 12x + 12 - 12 = (x+3)^2 - 12$$

$$f(x) = x^2 - 4x^2 + 12x - 1 + 12 = (x-2)^2 + 11$$

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$$\Rightarrow \frac{g(\sqrt{12}-r)}{f(\sqrt{12}+r)} = \frac{12-12}{12+11} = \frac{-12}{23} = -\frac{12}{23}$$

$$f(x) + g(x) = \sqrt{x + \epsilon\sqrt{x-c}} + \sqrt{x - \epsilon\sqrt{x-c}} = \sqrt{(x-\epsilon) + \epsilon\sqrt{x-c} + \epsilon} + \sqrt{(x-\epsilon) - \epsilon\sqrt{x-c} + \epsilon}$$

$$\Rightarrow \sqrt{(\sqrt{x-\epsilon} + \epsilon)^2} + \sqrt{(\sqrt{x-\epsilon} - \epsilon)^2} = |\sqrt{x-\epsilon} + \epsilon| + |\sqrt{x-\epsilon} - \epsilon|$$

$$\xrightarrow{x \geq \epsilon} f(x) + g(x) = 2\sqrt{x-\epsilon} = \underbrace{a+b\sqrt{x+c}}_{\substack{a=0 \\ b=2}} \rightarrow c = -\epsilon \Rightarrow \frac{a+b}{c} = \frac{2}{-\epsilon} = -\frac{1}{\epsilon}$$

$$f(x) = \frac{x+2}{(x-2)(x-1)} \rightarrow D_f \subset \mathbb{R} - \{2, 1\}$$

1, 2, 0

$$\text{نسبة: } 2, 0 \Rightarrow \frac{g(0)}{f(0)}, \frac{g(2)}{f(2)} \rightarrow \left\{ 4, -\frac{1}{2} \right\} \quad \left\{ \left(1, -\frac{1}{2}\right), (2, 4) \right\}$$

$$\text{ا) } x=1 \rightarrow x=\frac{1}{2}, x=2 \rightarrow x=2 \rightarrow f(x) = \left\{ \left(\frac{1}{2}, 2\right), \left(\frac{2}{3}, -1\right), (2, 2), \left(-\frac{1}{2}, 2\right) \right\}$$

$$\text{ب) } x^2=1 \rightarrow x=\pm 1, x^2=2 \rightarrow x=\pm\sqrt{2} \Rightarrow f(x^2) = \left\{ (1, 2), (-1, 2), (\sqrt{2}, -1), (-\sqrt{2}, -1), (2, 2), (-2, 2) \right\}$$

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$$\text{ج) } 2g^2(x) + 1 = \left\{ (-2, 19), (1, 5), (9, 9), (-1, 1) \right\}$$

$$\text{د) } \text{نسبة: } 1, 3, -1 \rightarrow \frac{2f(1)}{g(1)}, \frac{2f(3)}{g(3)}, \frac{2f(-1)}{g(-1)} = \left\{ (1, -4), (3, -1) \right\}$$

= 0 = تعريف نسبه