

$$\left\{ \begin{array}{l} x > 0 \quad \sqrt{2x-1} - x+1 = \sqrt{x} \rightarrow x > 0 \\ x < 0 \quad \sqrt{2x+1} - x+1 = \sqrt{x} \rightarrow x < 0 \end{array} \right\} \rightarrow D = \left[-\frac{1}{2}, \frac{1}{2}\right]$$

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

$$= \frac{2(2x+1)^2}{(2x+1)^2} = \frac{2}{2x+1} \Rightarrow 2x+1 \neq 0 \Rightarrow x \neq -\frac{1}{2}$$

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

$$\frac{(x+1)(x-1)}{(x-1)^2} = \frac{x+1}{x-1} \Rightarrow a+b+c=0$$

$$x+1 - 2x \Rightarrow b=1, a=-1$$

$$x=0 \rightarrow \frac{0+1-0}{0-1} = -1 = a+c \Rightarrow c=1$$

$$x=1 \rightarrow \frac{a+1}{b+1} = 1 \quad c=1 \Rightarrow a+1 = b+1$$

$$x=-1 \rightarrow \frac{-a+1}{b-1} = -1 \quad c=1 \Rightarrow -a+1 = b-1$$

$$b+c = \frac{1}{2} + 1 = \frac{3}{2} = \frac{3}{2}$$

$$f = 2b+1$$

$$2b = 1 \Rightarrow b = \frac{1}{2}$$

$$f(x+1) = (x-2)^2(x), \quad f(1-x) = (-x-2)^2(-x)$$

$$x^3 - 4x^2 + 4x - 2x^3 - 4x^2 - 4x = -2x^3$$

$$\left. \begin{aligned} 1-2x &= -1 \Rightarrow x=1 \Rightarrow f(-1) = 1 \\ 1-2x &= 3 \Rightarrow x=-1 \Rightarrow f(3) = 1 \end{aligned} \right\} x=1 \text{ or } 3$$

$$x + \sqrt{x} = 4 \xrightarrow{x=9} \underline{x=9} \Rightarrow f(9) = 1 + 2(9) = 19 \quad \textcircled{V}$$

$$\begin{aligned} (x-1)^4 + (x-1) + (1-x)^4 + (1-x) \\ = x^4 - x^3 + x - 1 + x - 1 + 1 - x + x^4 - x^3 + 1 - x = 0 \end{aligned}$$

$$x \text{ and } y \text{ are } \dots$$

$$\begin{aligned} (a - \frac{a}{x}) > 0 \Rightarrow a > \frac{a}{x} \quad b - \frac{b}{x} > 0 \Rightarrow \frac{b}{x} > x \\ (\frac{a}{x}, \frac{b}{x}) \end{aligned}$$

$$\frac{a}{x} = \frac{b}{x} = 1 \Rightarrow a = \frac{x}{x}, b = x$$

$$f - g = \{(b, k)\} \xrightarrow{2(k-1) + 3k = k} f(k) = 2 \Rightarrow k = \frac{1}{3}$$

$$a - \frac{b}{x} - k = 1 - 2 - \frac{1}{x} = \frac{x}{x}$$

$$\begin{aligned} m - x > 0 \Rightarrow x < m \\ x > -1 \end{aligned} \quad \left. \begin{aligned} & \\ & \end{aligned} \right\} D_{f \times g} = [-1, m] \quad \textcircled{1.}$$

$$\Rightarrow m = 1$$

$$(f - g)(x) = 4\sqrt{x} \xrightarrow{f(x) = x + n, g(x) = 2\sqrt{x}}$$

$$x + n - 2\sqrt{x} = 4\sqrt{x}$$

$$n = 2\sqrt{x}$$

$$m = 2\sqrt{x} - 2$$

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$$\Rightarrow m \text{ and } n = 2 + 2\sqrt{x} = 2 + 2\sqrt{2}$$