



۱۹۱۵ آفرین

بازمده

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تکلیف ۷

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

$$x - 4\sqrt{x-4} + x + 4\sqrt{x-4} + 2\sqrt{x^2 - 16x + 16} =$$

$$2x + 2(|x-4|) = 4x - 8 \Rightarrow f+g = \sqrt{4x-8} = 2\sqrt{x-4}$$

داده $x \geq 4$ است چون $\sqrt{x-4}$ و صورت بیان $\sqrt{x-4}$ باشد

$$\frac{x+4}{x-4} = \infty - \frac{1}{x}$$

① ۱.۵

$$\frac{g}{f} = \left\{ \left(2, -\frac{1}{2} \right) \left(0, \frac{1}{2} \right) \right\}$$

$$f(2) = \frac{4}{-1+4+3} = -1$$

$$f(1) = \frac{3}{1-4+3} = 0$$

$$\frac{4}{2} - \frac{4 \times 3}{2} = 4$$

$$f(3) = \frac{5}{9-12+3} = 0$$

$$f(0) = \frac{2}{3}$$

انتگرال

$$\left\{ \left(\frac{1}{2}, 2 \right) \left(\frac{3}{2}, -1 \right) \left(2, 2 \right) \left(-\frac{1}{2}, 6 \right) \right\}$$

$$\left\{ \left(\pm 1, 2 \right) \left(\pm \sqrt{3}, -1 \right) \left(\pm 2, 2 \right) \right\}$$

$$\left\{ \left(-1, 2 \right) \left(1, 2 \right) \left(\sqrt{3}, -1 \right) \left(-\sqrt{3}, -1 \right) \right\}$$

$$\left\{ \left(-2, 19 \right) \left(1, 3 \right) \left(3, 9 \right) \left(-1, 1 \right) \right\}$$

$$\left\{ \left(1, -4 \right) \left(3, -1 \right) \left(-1, \frac{1}{2} \right) \right\} \Rightarrow \left\{ \left(1, -4 \right) \left(3, -1 \right) \right\}$$

$$h = \left\{ \left(2, 5 \right) \left(3, 5 \right) \left(-2, 6 \right) \right\}$$

$$g(x) + 1 = 1 \text{ if } x \notin \mathbb{Z}$$

$$D\left(\frac{f}{g+1}\right) = D_f \cap D_g - \text{خطای که حذف شود}$$

$$D_{\frac{f}{g+1}} = \{0, 1, 2\}$$

$$D_f = 3x \geq 0 \Rightarrow x \geq 0$$

$$\sqrt{3x} - x \geq 0 \Rightarrow 3x \geq x^2 \Rightarrow x \neq 2$$

$$\frac{0}{1} + \frac{1}{1} + \frac{2}{1}$$

$$P(1) = \sqrt{10 - 1 - 9} = 0 \quad P(r) = \sqrt{10 - r^2 - r^2} = \sqrt{r} \quad (7)$$

$$P(r) = \sqrt{10 - 17 - r^2} = 0 \quad P(2) = \sqrt{10 - 12 - 4} = 0 \quad (8)$$

$$h = \left\{ \left(\frac{1}{\sqrt{r}} \right) \left(1, \frac{0}{r} \right) \left(2, \frac{\sqrt{r}}{r} \right) \left(r, \frac{0}{r} \right) \right\} \Rightarrow h = \left\{ \left(1, \frac{0}{r} \right) \left(2, \frac{\sqrt{r}}{r} \right) \left(r, \frac{0}{r} \right) \right\}$$

$$(a) \quad y = \frac{x^{r-1}x^r + r^2x}{x^{r-1}x^r + r^2x} \xrightarrow{-1} y-1 = (x-1)^r \quad (9)$$

$$x = \sqrt[r]{y-1} + 1 \Rightarrow y-1 \in \mathbb{R} \Rightarrow R = \mathbb{R}$$

$$b) \quad y = \frac{1}{x^r - r^n} \Rightarrow y^{nr} - r^n y - 1 = 0 \quad x_{1,2} = \frac{+ry \pm \sqrt{r^2 y^2 - 4(-1)(y)}}{2y}$$

$$r^2 y^2 + r^2 y > 0 \Rightarrow y(y+1) > 0 \quad \frac{-1}{+1} \quad y > 0$$

$$R_f = (-\infty, -1] \cup (0, +\infty)$$

$$(a) \quad \frac{f}{r} = r \quad c - 1 + 10 = 9 \quad [9, +\infty) \quad (10)$$

$$b) \quad \frac{-9}{-r} = r \quad -9 + 18 + c = 18 \quad (-\infty, 18] \quad (11)$$

$$c) \quad \frac{f}{r} = r \quad f - 1 - c = -1 \quad \sqrt{[-19 + \infty)} \Rightarrow [0, +\infty)$$

$$d) \quad \frac{-9}{-r} = r \quad -9 + 18 = 9 \Rightarrow [0, 9]$$

$$(a) \quad \mathbb{R} \quad b) \quad \mathbb{R} \quad c) \quad [0, +\infty) \quad d) \quad [0, +\infty) \quad (12)$$

$$(a) \quad R_f = \mathbb{R} - \{r\} \quad (13)$$

$$b) \quad R_f = \mathbb{R} - \{r\}$$

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

$$g(n) = \sqrt{x-r-r\sqrt{n-r}+r} = \sqrt{(\sqrt{n-r}-r)^2} = |\sqrt{n-r}-r| \xrightarrow{n \geq 1} \sqrt{n-r}-r$$

$$f(n)+g(n) = \sqrt{n-r}+r+\sqrt{n-r}-r = 2\sqrt{n-r} \quad \begin{array}{l} \xrightarrow{a=0} \\ \xrightarrow{b=r} \\ \xrightarrow{c=-r} \end{array} \rightarrow \frac{a+b}{c} = \frac{r}{-r} = -\frac{1}{r}$$

$$Df = \mathbb{R} - \{1, r\} \quad (x^r - rx + r \neq 0 \rightarrow x \neq 1, r) \quad (2)$$

$$Df \cap Dg = \{r, 0\} \rightarrow \frac{g}{f} = \left\{ \left(r, -\frac{1}{r} \right), (0, 1) \right\}$$