

$$y = \sqrt{x f(x)} \quad x f(x) \geq 0 \quad \frac{-a \quad 0 \quad r \quad a}{\overline{+} \quad \overline{+} \quad \overline{+} \quad \overline{+}}$$

$$D_f = [r, a] \cup [-a, 0]$$

$$y = \sqrt{\frac{-x}{f(x)}} \quad \frac{-x}{f(x)} \geq 0 \quad \frac{-a \quad -r \quad 0 \quad r \quad a}{\overline{-} \quad \overline{+} \quad \overline{+} \quad \overline{+} \quad \overline{-}}$$

$$D_f = (-r, 0) \cup \{0\}$$

$$f(x) - f(r) = \frac{r}{x} - rx + \epsilon \xrightarrow{x=r} -f(r) = -r \rightarrow f(r) = -r \leq r$$

$$\xrightarrow{x=-r} f(-r) = \epsilon + r = 10$$

$$\begin{cases} x - \sqrt{x} + \epsilon & : x > r \\ rx + r & , x \leq r \end{cases} \quad f(f(a)) + f(f(1))$$

$$f(a) = a - \sqrt{a} = r \xrightarrow{f(r)} f(r) = v \quad f(1) = a \xrightarrow{f(a)} f(a) = r$$

$$v + r = 9$$

$$f(x-1) = ax^2 + a - 2ax - bx - b + r$$

$$-f(x) + f(x-1) = ax^2 + a - 2ax - bx - b + r - ax^2 + bx - r$$

$$\rightarrow a - 2ax - b = 4x + r \rightarrow -2ax = 4x \Rightarrow a = -r$$

$$\Rightarrow b = -a \rightarrow -r - a = -1$$

Hashtag

H A S H T A G

$$f(x) = \frac{x^5 + 5x + 4}{x^5 + 5x + 4} = \frac{(x+1)^5 + 1}{(x+1)^5 + 1} \xrightarrow{f(1-1)} -4$$

$$\frac{(\sqrt{5})^5 + 1}{(\sqrt{5})^5 + 5} = \frac{6}{4} = \frac{3}{2}$$

$$f\left(x - \frac{1}{x}\right) = \frac{x^5 + 1}{x^5} = x^5 + \frac{1}{x^5} \rightarrow f\left(x - \frac{1}{x}\right) = \left(x - \frac{1}{x}\right)^5 + 1 - 4$$

$$\rightarrow \left(x - \frac{1}{x}\right)^5 = x^5 + \frac{1}{x^5} - 1$$

$$\Rightarrow f(-1) = 4 + 1 = 11$$

$$g(x) = \sqrt{9 - x^2} \quad 9 - x^2 \geq 0 \quad x^2 \leq 9 \rightarrow -3 \leq x \leq 3$$

$$\text{الف) } \frac{f}{g} = \left\{ \left(0, \frac{1}{3}\right), \left(1, \frac{-1}{\sqrt{2}}\right), \left(2, \frac{0}{\sqrt{5}}\right) \right\}$$

$$\text{ب) } \frac{g}{f} = \left\{ \left(0, \frac{3}{1}\right), \left(1, \frac{-\sqrt{2}}{1}\right), \left(2, \frac{\sqrt{5}}{0}\right) \right\}$$

نقطة غير موجودة

$$\text{ج) } \left\{ (2, 2), (2, 5), (-5, 2), (5, -1) \right\}$$

$$\text{د) } \left\{ (2, 2), (2, 5), (-5, 2), (5, -1) \right\}$$

$$\text{هـ) } \left\{ (2, 4), (2, 9), (-3, 13), (1, 13) \right\}$$

$$\text{و) } \left\{ (1, 1), \left(\frac{5}{2}, 4\right), \left(-\frac{5}{2}, 2\right), \left(\frac{1}{2}, -2\right) \right\}$$

Subject:

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$$g(x) = \{(\widetilde{1}, 0), (\widetilde{2}, 1), (-1, 4), (-2, -3), (\widetilde{3}, -1)\} \quad - \text{10}$$

$$f(x) = \{(\widetilde{2}, 3), (4, 2), (1, 4), (\widetilde{3}, 1), (2, 5)\}$$

$$\text{الف) } f - g = \{(1, 4), (2, 2), (\widetilde{3}, 2)\}$$

$$\text{ب) } \frac{f}{g} = \{(\widetilde{1}, \frac{4}{0}), (2, 4), (\widetilde{3}, \frac{2}{-1})\}$$

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