نام و نام خانوادگی .... هستی رمضانی .... پاسخنامه تشریحی تکلیف شماره .... کلاس ... یازدهم دختر

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

$y=\sqrt{x^3 f(x+1)} \longrightarrow f(x+1)=(\frac{1}{2})^{x-1}-1$

$x^3(2^{1-x}-1)\geqslant 0$

$0 \longleftarrow$, $\hookrightarrow 0 \longrightarrow 1-x=0 \to x=1$

$\boxed{D_y=[0,1]}$

۲

$f(x)=\sqrt{x+|x+2|}$

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

2

$-x-x+2$ | $-x+x-2$

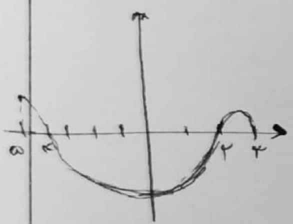
$-2x+2$ | -2 ×

$-2x+2\geqslant 0$

$2\geqslant 2x \longrightarrow 1\geqslant x$

$\boxed{D_f=(-\infty,1]}$

۳



$y=\sqrt{f(x-1)} \longrightarrow +1$

$f(x) \longrightarrow 2,3,-4$

$-4 \quad 1 \quad 2 \quad 3$

$- \quad + \quad - \quad + \quad -$

$\boxed{D_y=(-4,1]\cup(2,3)}$

۴

$y=\frac{1}{9x^4-7x^2-4x-3} \longrightarrow 9x^4-9x^2-x^2-4x-4+1$

$\boxed{\sqrt{-(a+b)}=\sqrt{-(-1-3)}=2}$

$(9x^4-6x^2+1)-(x^2+4x+4)$

$(3x^2-1)^2-(x+2)^2 \neq 0 \quad 3x^2-x-3=0$

$y=\frac{1}{3x^2+ax+b}$

$3x^2-x-3=3x^2+ax+b$

$a=-1, \ b=-3$

۵

$f(x)=x^3+x \qquad y=\sqrt{f(x)-f(\frac{4}{x})}$

$y=\sqrt{x^3+x-\frac{64}{x^3}-\frac{4}{x}} \longrightarrow \sqrt{\frac{1}{x^3}(x^6-64)+\frac{1}{x}(x^2-4)}$

$(x^2-4)(x^4+16+4x^2)$

$\frac{1}{x}(x^2-4)(\frac{1}{x^2}(x^4+16+4x^2)+1)$

$y=\sqrt{\frac{1}{x}(x^2-4)(x^2+\frac{16}{x^2}+5)}$

$0 \quad \pm 2 \quad +$

$-2 \quad 0 \quad +2$

$- \quad + \quad - \quad +$

$D_y=[-2,0)\cup[2,+\infty)$

$f(x^3+x)=2x^2-1$

$f(2)+f(10) \rightarrow x^3+x=2 \rightarrow x=1 \rightarrow f(2)=2-1=1$

$x^3+x=10 \rightarrow x=2 \rightarrow f(10)=8-1=7$

$1+7=8$ 6

$f(x)=x^3-6x^2+12x \quad +8-8$

$\rightarrow (x-2)^3+8$

$g(x)=x^3+9x^2+27x \quad +27-27$

$\rightarrow (x+3)^3-27$ 7

$$\frac{g(\sqrt[3]{7}-3)}{f(\sqrt[3]{2}+2)}=\frac{(\sqrt[3]{7}-3+3)^3-27}{(\sqrt[3]{2}+2-2)^3+8}=-2$$

$f(x)=\sqrt{x+4\sqrt{x-4}} \rightarrow x-4+4\sqrt{x-4}+4$

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

$g(x)=\sqrt{x-4\sqrt{x-4}} \rightarrow \sqrt{x-4}-2 \rightarrow \sqrt{x-4}+2$ 8

$f(x)+g(x)=a+b\sqrt{x+c} \quad \sqrt{x-4}+2+\sqrt{x-4}-2=2\sqrt{x-4}$

$a=0 \quad b=2 \quad c=-4 \quad \frac{0+2}{-4}=-\frac{1}{2}$

$f(x)=\frac{x+2}{x^2-4x+3} \rightarrow D_f=\mathbb{R}-\{1,3\}$

$g(x)=\{(2,1)(1,0)(3,5)(0,4)\}$ 9

$\frac{g}{f}=\boxed{\{(2,-\frac{1}{4})(0,6)\}} \quad (2,\frac{1}{-4}),(0,\frac{4}{\frac{2}{3}})$

$f(x)=\{(1,2)(3,-1)(4,2)(-1,6)\} \quad g(x)=\{(-2,3)(1,-1)(4,2)(-1,0)\}$

$f(2x)=\{(\frac{1}{2},2)(\frac{3}{2},-1)(2,2)(-\frac{1}{2},6)\}$

$f(x^2)=\{(1,2)(-1,2)(\sqrt{3},-1)(-\sqrt{3},-1)(2,2)(-2,2)\}$ 10

$\frac{2f}{g}=\{(1,-4)(3,-1)\} \quad 2g^2(x)+1=\{(-2,19)(1,3)(4,9)(-1,1)\}$