DATE / / Subject:

تکلیف ۲۸ — بهاره — فاطمه حکیم الهی

گروه دوم دختران C

$a^2+2a = a^2-4 \Rightarrow a=-2$ (۱ ۵

$\lim_{x\to 1^+} f(x) = \frac{4+a}{4-b} = 2$ $\lim_{x\to 1^+} g(x) = 4+b = 2 \Rightarrow b=-1$ (۲ ۵

$\frac{4+a}{4+1} = 2 \Rightarrow a = 11$ $f(1) = \frac{1+11}{2+1} = \frac{12}{3} = 4$

$x=-1 \rightarrow$ [illegible] $2(-1)^2 + a(-1) + b = 0$ (۳ ۱

$\Rightarrow \begin{cases} 2-a+b=0 \\ 32+4a+b=0 \end{cases}$

$x=4 \rightarrow 2(4^2)+4(a)+b=0 \Rightarrow$

$-30-5a=0 \Rightarrow a=-6$

$b=-8$

$a+b = -6-8 = -14$

$f(x) = \frac{6x+1}{2x^2-4x-8} \rightarrow f(1) = \frac{6(1)+1}{2(1)^2-4(1)+8} = \frac{7}{6}$

$-1 =$ [illegible] ریشه مخرج

$x^2 + \frac{-a}{4}x + \frac{-b}{4} =$ [illegible] $\xrightarrow[x=-1]{}$ $1 + \frac{a}{4} - \frac{b}{4} = 0$ ۵

$\times 4 \rightarrow 4+a-b=0 \Rightarrow 4+a=b$

$-4x^2 + ax + 4 + a = 0 \Rightarrow$ [illegible]

[illegible] $\Rightarrow \Delta = 0 \Rightarrow a^2 - 4(4+a)(-4) =$

$a^2 + 64 + 16a = 0 \Rightarrow (a+8)^2 = 0 \Rightarrow a = -8 \Rightarrow$

$b=-4$ $a+b = -8-4 = -12$

DATE / / Subject:

~~[illegible]~~

$x^2+mx+1 \xrightarrow{\Delta<0} m^2-4<0 \Rightarrow -2<x<2$ (5)(a)

$x^2+mx+1=(x-1)^2 \Rightarrow m=-2 \Rightarrow$ $\boxed{m=[-2,2)}$

$4-\frac{1}{x^2}\geq 0 \Rightarrow 4\geq \frac{1}{x^2} \Rightarrow \frac{1}{4}\leq x^2$ (9)(5)

$\Rightarrow x=(-\infty,-\frac{1}{2}]\cup[\frac{1}{2},+\infty)$

$mx^2+2mx+1\geq 0 \Rightarrow \Delta\leq 0 \quad m(m-1)$ (1)(7)

$(2m)^2-4(1)(m)\geq 0 \Rightarrow 4m^2-4m\leq 0 \Rightarrow m^2-m\leq 0$

$m=(-\infty,0]\cup[1,+\infty)$ $\quad m\in[0,1]$ $\quad \begin{array}{c|ccc} & 0 & 1 & \\ \hline & + & - & + \end{array}$

$D_{(f)}=D_{(g)}=\mathbb{R} \Rightarrow g(\frac{1}{2})=2=f(\frac{1}{2})=2+k$ (5)(8)

$R(f)=R(g) \Rightarrow k=0$ $\Big\}$ $a+1k=\frac{1}{2}$

$\frac{4x^2-1}{2x-1}=2x+1 \Rightarrow a=\frac{1}{2}$

if $x\neq\frac{1}{2}$

$Df=Dg=\mathbb{R}$ $\quad \frac{9x^2-4}{3x+2} \xrightarrow{\text{if } x\neq\frac{-2}{3}} =3x-2$ (9)(5)

$g(\frac{-2}{3})=-2-2=-4$

$f(\frac{-2}{3})=-4=-2a+2 \Rightarrow a=3$ $\quad b=-2 \Rightarrow a-b=5$

$g(2)=4=f(2)=2a^2+2a \Rightarrow 2a^2+2a-4=0$ (5)(10)

$a^2+a-2=0 \Rightarrow a=\begin{cases}1\\-2\end{cases}$

Arman

Scanned with CamScanner