نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۸ کلاس .....

۱

$a^2+2a=a^2-4 \longrightarrow 2a=-4 \longrightarrow a=-2$

۲

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

$4+b=2 \rightarrow b=-1$

$2=\frac{2x^2+a}{2x+1} \quad x=2 \rightarrow$

$2=\frac{8+a}{5} \rightarrow a=11$

۳

$if\ f(x)=-1 \longrightarrow (2-a+b=0)$

$if\ x=2 \longrightarrow 2(2)+2a+b=0$

$4+5b=0 \rightarrow b=-8$

$a=-4$

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

$\rightarrow f(1)=\frac{5}{-12}=-\frac{5}{12}$

۴

$if\ x=-1 \longrightarrow -2(x+1)^2=0 \longrightarrow -2x-8x-2=0$

$a \quad b \Rightarrow a+b=-12$

۵

$if\ x=0 \longrightarrow (m-1)(m^2+mx+1) \longrightarrow x^2+mx+1=(m-1)^2 \longrightarrow m=-2$

x^2+2x+1

$x^2+mx+1 \quad \Delta<0 \longrightarrow m^2-4<0 \longrightarrow m^2<4$

$-2<m<2 \longrightarrow -2\leq m<2$

جواب

۶

$f: \frac{1}{x^2} \geq 0 \longrightarrow f \geq \frac{1}{x^2} \xrightarrow{x \neq 0} f x^2 \geq 1 \longrightarrow x^2 \geq \frac{1}{2} \longrightarrow x \geq \frac{1}{2}$

$\hookrightarrow x \leq -\frac{1}{2}$

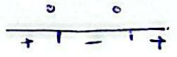
$D_f = \mathbb{R} - [-\frac{1}{2}, \frac{1}{2}]$

۷

$mx^2 - 2mx + 1 \geq 0 \longrightarrow \mathbb{R}$ برابر D_f

$\Delta < 0$ یا $\longrightarrow 4m^2 - 4m < 0 \quad 4m(m-1) \leq 0$

$\hookrightarrow m \geq 0$



$m \in [0,1]$

۸

$if\ x = \frac{1}{2} \longrightarrow 2 + k = 2 \longrightarrow k = 0$

$2x - 1 = 0 \longrightarrow x = \frac{1}{2} \longrightarrow a = \frac{1}{2}$

$\Big\} \quad a + k = \frac{1}{2}$

۹

$if\ x = -\frac{1}{2} \longrightarrow -2 + b \longrightarrow -2a + 2 \longrightarrow 2a + b = 2$

$\hookrightarrow 2a - b = 4 \longrightarrow a = 2$

$if\ x = 0 \longrightarrow b = -\frac{4}{2} = -2$

۱۰

$if\ f(x) \neq 2 \longrightarrow x + 2 = \frac{x^2 - 4}{x - 2} \longrightarrow x^2 - 4 = x - 4 \longrightarrow x \in \mathbb{R}$

$if\ f(x) = 2 \longrightarrow x + 2 = 2a^2 + ax \longrightarrow 4 = 2a^2 - 2a \longrightarrow 2a - 2a - 4 = 0$

$\Rightarrow 2(a^2 + a - 2) = 0 \quad (a+2)(a-1) = 0 \begin{cases} \nearrow a = -2 \\ \searrow a = 1 \end{cases}$