۱- $b+c=-1/5$, $y=1-\log_c^{ax-b}$

طبق نمودار: $2=1-\log_c^{-b} \Rightarrow \log_c^{-b}=-1 \Rightarrow \frac{1}{c}=-b$

$0=1-\log_c^{-1/5a-b} \Rightarrow \log_c^{-1/5a-b}=1 \Rightarrow c=-1/5a-b$ ★

$b+c=-1/5$

$-\frac{1}{c}+c=-1/5 \Rightarrow c^2+1/5c-1=0$

$(c+2)(c-0/5)=0$ ⟨ $c=-2$ غ ق ق ($c>0$) ، $\boxed{c=0/5}$

$0/5+b=-1/5 \Rightarrow \boxed{b=-2}$

★ $0/5=-1/5a+2 \Rightarrow 1/5a=1/5 \Rightarrow \boxed{a=1}$

$(a+c)b=(1/5)\times(-2)=-3$

۲- طبق نمودار: $\frac{2}{3}=1+c\times 3^a \Rightarrow c\times 3^a=-\frac{1}{3}$

$0=1+c\times 3^{a+b} \Rightarrow c\times 3^{a+b}=-1$

$\left.\right\} \overset{\div}{\Rightarrow} 3^b=3 \Rightarrow \boxed{b=1}$

$f(-1)=1+c\times 3^{a-b}=1+\frac{c\times 3^a}{3}=1+\frac{-\frac{1}{3}}{3}=\frac{8}{9}$ (که $3^{a-b}=\frac{3^a}{3}$)

۳- طبق نمودار: $2=c+\log_5^b \Rightarrow c=2-\log_5^b$

$0=c+\log_5^{2/4a+b} \Rightarrow c=-\log_5^{2/4a+b}$

$\left.\right\} 2-\log_5^b=-\log_5^{2/4a+b}$

$2=\log_5^b-\log_5^{2/4a+b}$

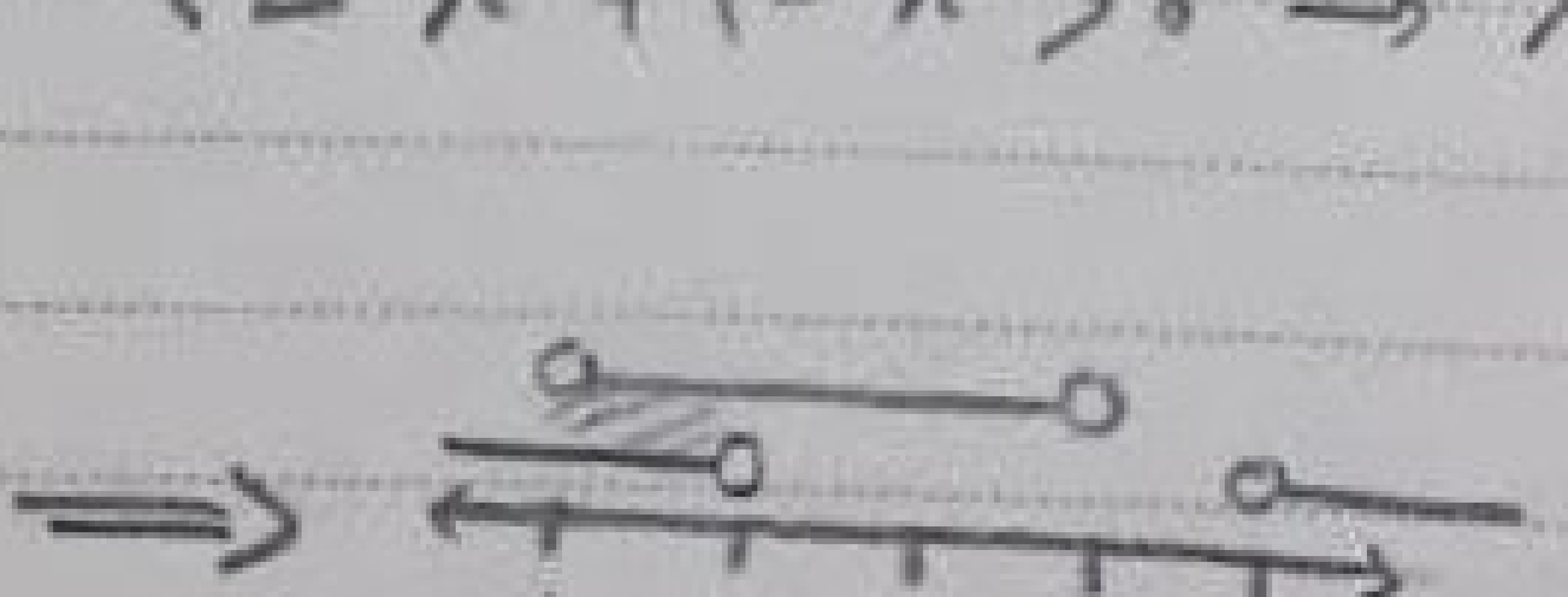
$\Rightarrow 2=\log_5^{\frac{b}{2/4a+b}} \Rightarrow 25=\frac{b}{2/4a+b} \Rightarrow 60a+25b=b$

$60a=-24b \Rightarrow \frac{a}{b}=\frac{-24}{60}=\frac{-2}{5}$

۴- $\log_4^{(|x^2-2|-x)>0} \Rightarrow |x^2-2|-x>0$

$x^2-2-x>0 \rightarrow x^2-x-2>0$ (ریشه‌ها: 2 ، -1)

$-x^2+2-x>0 \rightarrow x^2+x-2<0$ (ریشه‌ها: -2 ، 1)

$\Rightarrow$ 

۱۵ چهارشنبه

بهمن ۱۳۹۹
۲۰ جمادی الثانی ۱۴۴۲
2021 February 3

۵- $x=1 \rightarrow -1-2^{a}+8=\varepsilon \Rightarrow \varepsilon=2+2^{b-a}$

$\star\ b-a=1$ / $f(-1)=10 \Rightarrow 10=2+2^{b+a} \overset{\star\star}{\Rightarrow} b+a=3$

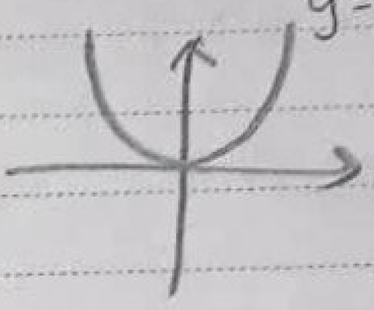
$\star, \star\star \Rightarrow 2b=\varepsilon \Rightarrow b=2,\ a=1$ $\{ 2b-a=\varepsilon-1=\boxed{3}$

۶- $x=1 \rightarrow 0 \Rightarrow 0=-2+(\frac{1}{2})^{A+B} \Rightarrow A+B=-1$
$x=2 \rightarrow 2 \Rightarrow 2=-2+(\frac{1}{2})^{2A+B} \Rightarrow 2A+B=-2$
$\Big\} \begin{matrix} A=-1 \\ B=0 \end{matrix}$

$f(3)=-2+(\frac{1}{2})^{-1(3)}=-2+8=6$

۱۰-

الف) $y=9^{\log_3^{x^2}}=3^{2\log_3^{x^2}}=3^{\log_3^{x^4}}=x^2$



ب) $y=\log x^2 \Rightarrow a>0\ (a=10)$