شایان رومی زاده

$\left|\begin{matrix}-\frac{3}{2}\\0\end{matrix}\right. \rightarrow 0 = 1 - \log_c^{(-\frac{3}{2}a - b)} \rightarrow -\frac{3}{2}a - b = c \rightarrow a = -\frac{2}{3}(-\frac{3}{2})$ ⓵

$\left|\begin{matrix}0\\2\end{matrix}\right. \rightarrow 2 = 1 - \log_c^{-b} \rightarrow -b = c^{-1} \rightarrow b = -\frac{1}{c} \;,\; b + c = -\frac{3}{2} \rightarrow c - \frac{1}{c} = -\frac{3}{2}$ (1)

$c^2 + \frac{3}{2}c - 1 = 0$

$2c^2 + 3c - 2 = 0$

$(c - \frac{1}{2})(c + 2) = 0$

$c = -2 , \frac{1}{2}$

$b = -2$

$c = \frac{1}{2}$

$(a + c)^b = (1 + \frac{1}{2})^{-2} = \boxed{\frac{4}{9}}$ $(a + c)b = (\frac{3}{2})(-2) = -3$

$A\left|\begin{matrix}1\\0\end{matrix}\right. \rightarrow 0 = 1 + c \times 3^{a+b} \rightarrow 3^{a+b} = -\frac{1}{c} \rightarrow 3^a \times c = \frac{-1}{3^b} = -\frac{1}{3}$ (2)

$B\left|\begin{matrix}0\\\frac{2}{3}\end{matrix}\right. \rightarrow \frac{2}{3} = 1 + c \times 3^{b} \rightarrow -\frac{1}{3c} = 3^a \times ... \rightarrow +3^a \times 3^b \times 3^{-1} = 3^a ... \rightarrow +3^{-1} = 3^{-b}$

$\rightarrow b = 1 \rightarrow f_{(-1)} = 1 + c \times 3^a \times 3^{-b} = 1 + (-\frac{1}{3} \times \frac{1}{3}) = \boxed{\frac{8}{9}}$

$\rightarrow a =$

$A\left|\begin{matrix}2,4\\0\end{matrix}\right. \quad 0 = c + \log_5^{(2,4a+b)}$ $B\left|\begin{matrix}0\\2\end{matrix}\right. \quad 2 = c + \log_5^b \rightarrow b = 5^{2-c} = 25 \times 5^{-c}$ (3)

$\rightarrow 5^{-c} = 2,4a + b = 2,4a + 5^{2-c} \rightarrow 2,4a = -24 \times 5^{-c} \rightarrow a = -10 \times 5^{-c}$

$\frac{a}{b} = \frac{(-10) \times 5^{-c}}{25 \times 5^{-c}} = \boxed{-\frac{2}{5}}$

$|x^2 - 2| - x ...$ (4)

$x^2 - 2 \leq 0 \rightarrow -\sqrt{2} \leq x \leq \sqrt{2}$ ⓵ $\rightarrow -x^2 - x + 2 \geq 0$, $(x+2)(x-1) \leq 0$

$\rightarrow x^2 + x - 2 \leq 0$

	-2		1	
$+$		$-$		$+$

$[-2, 1]$ ⓶

$\rightarrow$ ⓵ $\cap$ ⓶ $=$ $[-\sqrt{2}, 1]$ Ⓐ

$x^2 - 2 > 0 \rightarrow x < -\sqrt{2} \;,\; x > \sqrt{2}$ ⓵′

$x^2 - 2 - x \geq 0 \rightarrow (x+1)(x-2) \geq 0$

	-1		2	
$+$		$-$		$+$

$\rightarrow (-\infty, -1] \cup [2, +\infty)$ ⓶′

⓵′ $\cap$ ⓶′ $= (-\infty, -\sqrt{2}) \cup [2, +\infty)$ Ⓑ

$\boxed{Ⓐ \cup Ⓑ = (-\infty, 1] \cup [2, +\infty)}$

$|x^2 - 2| - x \neq 0$

$g_{(1)} = -1 - 3 + 8 = 4 \rightarrow \left|\begin{matrix}1\\4\end{matrix}\right. \rightarrow f_{(1)} = 4 = 2 + 2^{b-a} \rightarrow 1 = b - a$

$f^{-1}(10) = -1 \rightarrow f_{(-1)} = 10 \rightarrow f_{(-1)} = 10 = 2 + 2^{b+a} \rightarrow 3 = a + b$

$\rightarrow b = 2 ,\; a = 1$ (5)

$\rightarrow 2b - a = \boxed{3}$

$y = x^{۲} - x \to \begin{vmatrix} ۱ \\ ۰ \end{vmatrix} , \begin{vmatrix} ۲ \\ ۲ \end{vmatrix}$

$f_{(۱)} = ۰ = -۲ + (\frac{۱}{۲})^{A+B} \Rightarrow -۱ = A + B$

$f_{(۲)} = ۲ = -۲ + (\frac{۱}{۲})^{۲A+B} \Rightarrow -۲ = ۲A + B$ $\Big\} \to A = -۱ , B = ۰$ ۶

$f_{(۳)} = -۲ + (\frac{۱}{۲})^{-۳} = ۸ - ۲ = \boxed{۶}$

$\frac{x}{۴} = x \times (\frac{۸}{۹})^{\frac{t}{۴۰}} \longrightarrow \frac{۱}{۴} = (\frac{۸}{۹})^{\frac{t}{۴۰}} \to \log_{۵}^{\frac{۱}{۴}} = \log_{۵}^{(\frac{۸}{۹})^{\frac{t}{۴۰}}}$

$\to -\log_{۵}^{۴} = \frac{t}{۴۰} \times (\log_{۵}^{۸} - \log_{۵}^{۹}) \to +(\frac{t}{۴۰})^{-۱} = -\frac{۳\log_{۵}^{۲} - ۲\log_{۵}^{۳}}{\log_{۵}^{۲} + \log_{۵}^{۳}} \Rightarrow \boxed{t = ۳۸۰}$ ۷

$۲(\log_{۵}^{۲} + \log_{۵}^{۳})$

~~$\frac{-۱۰}{۷\times۸} \to t^{-۱} = \frac{۴۰ \times ۲۰}{۳ \times ۳۸۰}$~~

$\log_{۲}^{۵} = ۲,۴ \to \log_{۵}^{۲} = \frac{۱۰}{۲۴}$

$\log_{۳}^{۵} = ۱,۴$, $\log_{۵}^{۳} = \frac{۱۰}{۱۴}$

$\frac{a}{۷} = a \times (\frac{۷}{۸})^{\frac{t}{۷}} \longrightarrow \log_{۷}^{\frac{۱}{۷}} = \log_{۷}^{(\frac{۷}{۸})^{\frac{t}{۷}}} \to -\log_{۷}^{۷} = \frac{t}{۷} \times (\log_{۷}^{۷} - \log_{۷}^{۸})$

$\to \frac{۱}{۷} = (\frac{۷}{۸})^{\frac{t}{۷}}$

$-۱ = \frac{t}{۷} \times (۱ - ۳\log_{۷}^{۲}) \to t = \frac{-۷}{۱ - ۳(\frac{۳}{۸})} = \frac{-۷}{-\frac{۱}{۸}} = \boxed{۵۶}$ ۸

$\log_{۳}^{۲} = ۱,۶ \to \log_{۳}^{۲} = \frac{۱۰}{۱۶}$

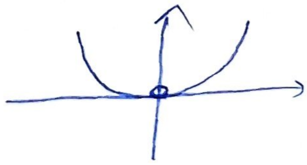
$\log_{۳}^{۲} \times \log_{۷}^{۳} = \frac{۱۰}{۱۶} \times \frac{۶}{۱۰} = \frac{۳}{۸} = \log_{۷}^{۲}$

$\frac{a}{۳} = a \times (\frac{۹۶}{۱۰۰})^{t} \to \frac{۱}{۳} = (\frac{۹۶}{۱۰۰})^{t} \to \log^{\frac{۱}{۳}} = \log^{(\frac{۹۶}{۱۰۰})^{t}}$

$\Rightarrow -\log^{۳} = t \times (\log^{۹۶} - \underbrace{\log^{۱۰۰}}_{۲}) = -\underbrace{\log^{۳}}_{۰,۴۸} = t \times (\underbrace{\log^{۲^{۵}}}_{۱,۵} + \underbrace{\log^{۳}}_{.۴۸} - ۲)$ ۹

$t = \frac{-۰,۴۸}{-۰,۰۲} = \boxed{۲۴}$

$y = ۹^{\log_{۳}^{x}} = x^{\log_{۳}^{۹}} = x^{۲}$



$x > ۰$

۱۰

$y = \log^{x^{۲}} = \log^{x \times x} = \log^{x} + \log^{x} = ۲\log^{x}$

$x^{۲} > ۰ \to x \neq ۰$

$\to x > ۰$