نیایش شاه نظری — تکلیف کد ۲۴ — یازدهم تجربی

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$f(x) = 3^{Ax+B} \rightarrow x=1 \rightarrow 3^{A+B} = 1 \rightarrow A+B=0$

$y=x^2 \rightarrow x=1 , y=1$
$\rightarrow x=2 , y=9$ | $x=2 \rightarrow 3^{2A+B} = 9 \rightarrow 2A+B=2$

$2A=2 \rightarrow A=1 , B=-1$ ۲

$f(x) = 3^{x-1} \rightarrow x=0 \rightarrow 3^{-1} = \frac{1}{3}$

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$\log_2 (4^x+15) = x+3 \rightarrow 2^{x+3} = 4^x+15 \rightarrow (2^x)\times 8 = (2^{2x})+15$ ۲
(a, a^2)

$a^2 - 8a + 15 = 0$

$a=3 \rightarrow 2^x=3 \rightarrow x=\log_2 3$

$a=5 \rightarrow 2^x=5 \rightarrow x=\log_2 5$

$x_1+x_2 = \log_2 3 + \log_2 5 = \log_2 15$

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$(\log_{21} 3)^2 + \log_{21} 147 \; \log_{21} 1323$ ۲

$(\log_{21} 3)^2 + (\log_{21} 7 + 1)(\log_{21} 3 + 2)$

$(\log_{21} 3)^2 + (2 - \log_{21} 3)(\log_{21} 3 + 2) = (\log_{21} 3)^2 - (\log_{21} 3)^2 + 4 = 4$

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$\log (x^2-2x+1) + 3\log (1-x) = 5$ ۲

$2\log (1-x) + 3\log(1-x) = 5 \rightarrow \log(1-x) = 1 \rightarrow 1-x=10$

$x=-9$

$\log_3 (-x) = \log_3 9$ ②

موضوع: _____ تاریخ: / /

③ $\log_2^{(x^2+2x+4)} + \log_2^{(x-2)} = 3 \rightarrow \log_2^{(x^2+2x+4)(x-2)} = 3$

$\log_2^{x^3-8} = 2 \rightarrow x^3 = 16 \rightarrow x = \sqrt[3]{16}$

$\log_{\sqrt[3]{2}}^{x} - \log_{2^{\frac{1}{3}}}^{16^{\frac{1}{3}}} = \boxed{4}$

④ $\log(2-x) - \log\frac{1}{(x-2)^2} = 3 \rightarrow \log(2-x) - \log(x-2)^{-2} = 3$

$3\log(2-x) = 3 \rightarrow 2-x = 10$

$\boxed{x = -8}$

$\log_{\sqrt{2}}^{-x} = \log_{\sqrt{2}}^{8} = \boxed{6}$

⑦ $3^{x^2-2} = 81^x \rightarrow x^2-2 = 4x \rightarrow x^2-4x-2 = 0$

$\Delta = 24 \rightarrow x = \frac{4 \pm 2\sqrt{6}}{2}$

$x = 2-\sqrt{6}$ ✗

$x = 2+\sqrt{6}$ ✓

$\log_4^{(x-2)} = \log_4^{\sqrt{6}} = \boxed{\frac{1}{2}}$

⑧ $\log_{18}^{8} = \frac{1}{\log_8^{18}} = \frac{1}{\frac{1}{3}(\log_2^{18})} = \frac{1}{\frac{1}{3}(1+2\log_2^3)}$

$\frac{1}{\frac{1}{3}(1+2\times\frac{8}{5})} = \frac{1}{\frac{21}{15}} = \frac{15}{21} = \boxed{\frac{5}{7}}$

تاریخ: / /

موضوع:

$$\log_{12}^{9} = \frac{\log_4^9}{\log_4^{12}} = \frac{\log_4^2 + \log_4^2}{\log_4^4 + \log_4^3} = \frac{\frac{1}{2} + 0.8}{1 + 0.8} = \frac{1.3}{1.8} = \frac{13}{18}$$ ۹

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$x = -1 \rightarrow a\log 2 - a + b\log 2 = 0$

$(a+b)\log 2 = a \rightarrow \log_{10}^2 = \frac{a}{a+b}$

$\log_2^{10} = \frac{a+b}{a}$

$\log_2^2 + \log_2^5 = \frac{a+b}{a}$

$\log_2^5 = \frac{b}{a}$

$(\sqrt{2})^{\frac{b}{a}} = \sqrt{2}^{\log_2^5} = 5^{\log_2^{\sqrt{2}}} = \boxed{\sqrt{5}}$
