نام و نام خانوادگی ...مرام... پاسخنامه تشریحی تکلیف شماره ...۲۲... کلاس ...یازدهم... پسر ...A...

۱

$f(x) = 3^{Ax+B}$ $\quad y = x^2$

$f(1) = 1$ ، $f(2) = 9 \longrightarrow 3^{A+B} = 1$ ، $3^{2A+B} = 9 \xrightarrow{\div}$

$3^{2A} = 9 \longrightarrow A = 1$، $3^{1+B} = 1 \longrightarrow B = -1$ $\longrightarrow f(x) = 3^{Ax-1}$

$x = 0 \longrightarrow 3^{-1} = \frac{1}{3} \longrightarrow \frac{1}{3}$

۲

$\log_2^{4^x + 15} = x + 2 \rightsquigarrow 4^x + 15 = 8 \times 2^x \longrightarrow 2^x = t$

$t^2 - 8t + 15 = 0 \rightsquigarrow (t-3)(t-5) = 0 \quad 2^{x_1} = 3 \quad 2^{x_2} = 5$

$x_1 = \log_2^3 \quad x_2 = \log_2^5 \longrightarrow x_1 + x_2 = \log_2^{15}$

۳

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

$2 + 2\log_{21}^7 + \log_{21}^3 + \log_{21}^3 \log_{21}^7$

$= (\log_{21}^3)^2 + \log_{21}^7 \log_{21}^3 + \log_{21}^7 + 3 \xrightarrow{\log_{21}^7 = 1 - \log_{21}^3} (\log_{21}^3)^2 + \log_{21}^3 - (\log_{21}^3)^2 + 1 - \log_{21}^3 + 3 = 4$

۴

$\log^{(1-x)^2} + 2\log^{(1-x)} = 5 \longrightarrow 5\log^{1-x} = 5 \longrightarrow 1 - x = 10 \longrightarrow x = -9$

$\log_3^{-x} = \log_3^9 = 2$

۵

$\log_2^{(x^2 + 2x + 4)(x-2)} = 2 \longrightarrow x^3 - 8 = 8 \longrightarrow x = \sqrt[3]{16}$

$\log_{\sqrt[3]{2}}^{x} \times \log_{\sqrt[3]{2}}^{\sqrt[3]{16}} \times \log_2^{16} = 4$

$\log^{(r-m)} - \log \frac{1}{(m-r)^r} = r \rightsquigarrow \log \frac{r-m}{\frac{1}{(r-m)^r}} = r \rightarrow r \log^{(r-m)} = r$ ۶

$\log^{r-m} = 1 \rightarrow r-m = 1 \rightarrow m = -1$ $\log \frac{-m}{\sqrt{r}} \rightarrow \log^{1}_{\sqrt{r}}$

$\rightsquigarrow \log^{1}_{\sqrt{r}} = 4$

$r^{mr-r} = \lambda^{m} \rightarrow r^{mr-r} = r^{rm} \rightarrow mr-r = rm \rightarrow m^r - rm - r = 0$ ۷

$(m-r)^r - 4 = 0 \rightarrow m-r = \pm\sqrt{4} \rightarrow m-r > 0 \rightarrow m-r = +\sqrt{4}$

$\log^{m-r}_{4} \rightarrow \log^{\sqrt{4}}_{4} = 1/r$

$\log^{r}_{r} = \frac{a}{\lambda}$ $\log^{\lambda}_{1\lambda} = ?$ $\left.\begin{array}{l}\log^{r}_{r} = \frac{a}{r} \rightarrow \log^{r}_{r} = \frac{\lambda}{a}\end{array}\right\}$ ۸

$\log^{\lambda}_{1\lambda} = \frac{1}{\log^{1\lambda}_{\lambda}}$ $\log^{1\lambda}_{\lambda} = \log^{r}_{\lambda} + \log^{9}_{1} \rightarrow \frac{1}{c}\log^{r}_{r} + \frac{r}{c}\log^{r}_{r}$

$\rightarrow \frac{1}{r} + \frac{r}{r} \times \frac{\lambda}{a} = \frac{1}{r} + \frac{1r}{1a} = \frac{r1}{1a} = \frac{v}{a}$ $\left.\begin{array}{l}\end{array}\right\} \rightarrow \log^{\lambda}_{1\lambda} = \frac{a}{v}$

$\log^{r}_{r} = 1,\lambda \rightarrow \log^{r}_{r} = 1,9$

$\log^{9}_{1r} = \frac{\log^{9}_{r}}{\log^{1r}_{r}} = \frac{\log^{r}_{r} + \log^{r}_{r}}{\log^{r}_{r} + \log^{r}_{r}} = \frac{1,4+1}{1,4+r} = \frac{r,4}{r,4} = \frac{1r}{11}$ ۹

$(a\log^{r})x^r + ax + b\log^{r} = 0$

$\xrightarrow{\Delta = 1} a\log^{r} + b\log^{r} = a \rightarrow \log^{ra+rb}_{1.} = a \rightarrow r^a + r^b = 10^a$ ۱۰

$\rightarrow r^b = a^a \rightarrow \log^{a^a}_{r} = b \rightarrow \log^{a}_{r} = \frac{b}{a} \rightarrow (\sqrt{r})^{\log^{a}_{r}} = \sqrt{a}$