لگاریتم

$10^{4} = 10000$

$\log_{10}^{10^{4}} = 4$

$\log_{10}^{10^{5}} = 5$

$\log_{10}^{10^{7}} = 7$

$\log_{10}^{10^{n}} = n$

$\log^{5\times10^{4}} = \log^{5} + \log^{10^{4}}$

$\log_{10}^{m\times n} = \log^{m} + \log^{n}$

$\log^{20000} = \log^{100000} - \log^{5}$

$\log^{\frac{m}{n}} = \log^{m} - \log^{n}$

$\log^{100000} = \log^{10^{3}} + \log^{10^{2}} = 3 + 2 = 5$

$\log_{10}^{1} = 0$

$\log_{10}^{10} = 1$

$\log_{10}^{2} = \%3$

$\log_{10}^{100} = \%3$

$\log_{10}^{3} = \%47$

$\log_{10}^{1000} = \%47$

$\log^{4} \rightarrow \log^{2^{2}} = 2\log^{2} = 2\times\%3 = \%6$

$\log^{2\times2} = \log^{2} + \log^{2} = \%3 + \%3 = \%6$

$\log_{10}^{5} = \%17$

$\log_{10}^{100000} = \%5$

$\log^{6} \rightarrow \log^{2\times3} = \log^{2} + \log^{3} = \%17$

$\%3 + \%47$

$\%100 = 6$

$\log_{10}^{7} = \%85$

$\log_{10}^{10000000} = \%7$

$\log^{8} \rightarrow \log^{2^{3}} = 3\log^{2} = \%9$

$\log^{2\times2\times2} = \log^{2} + \log^{2} + \log^{2} = \%3 + \%3 + \%3 = \%9$

$\log^{9} \rightarrow \log^{3^{2}} = 2\log^{3} = \%94$

$\log^{3\times3} = \log^{3} + \log^{3} = \%47 + \%47 = \%94$

$\log_{10}^{10000000} = 7$

$\log_{10}^{2\times10^5} = \log^2 + \log^{10^5} = 0.3 + 5 = 5.3$

$\log^2 = 0.3 \longleftrightarrow 10^{0.3} = 2$

$\log_{10}^{10^{0.5}} = 0.5$

$10^{0.875} = 7$

$5 \times \log_{10}^{10} = 5$

$\log_{10}^{7} = 0.845$

$\log_{10}^{21} = \log^{7\times3} = \log^7 + \log^3 = 0.845 + 0.477 = 1.322 \Longleftrightarrow 10^{1.322} = 21$

$\log_{10}^{0.8} = ? \longrightarrow \log^{\frac{8}{10}} = \log^8 - \log^{10} = \log^{2^3} - 1 = 3\log^2 - 1 = 0.9 - 1 = -0.1$

$10^{-0.1} = 0.8$

$\log_{10}^{2k} = -0.1 \longrightarrow 10^{-0.1} = 2k \longrightarrow k = \frac{1}{10^{0.1}} = \frac{1}{10^{-1} \times 10^{0.9}} = \frac{1}{10^{-1} \times 10^{0.3} \times 10^{0.6}}$

$\log^7 = 0.845 \quad 10^{0.845} = 7 \quad k = \frac{10^1}{2 \times 2} = \frac{10}{4} = 2.5$

$\log_{10}^{2k} = 1.845 \longrightarrow 10^{1.845} = 2k \longrightarrow 10^1 * 10^{0.845} = 10 \times 7 = 70$

$\log^{۳۶۰} = ? \longrightarrow \log^{\frac{۳۶}{۱۰}} \longrightarrow \log^{۳۶} - \log^{۱۰} = \log^{۹\times۴} - \log^{۱۰}$

$\underbrace{\log^{۳\times۳\times۲\times۲}} - \log^{۱۰} =$

$\log^{۳} + \log^{۳} + \log^{۲} + \log^{۲} - \log^{۱۰}$

$٪۴۸ + ٪۴۸ + ٪۳ + ٪۲ - ۱ = ٪۹۶$

$\log_{۱۰}^{y} = ۲٫۷ \longrightarrow ۱۰^{۲٫۷} = y \longrightarrow ۱۰^{۲۰} \times ۱۰^{٪۷} = y \longrightarrow y = ۱۰۰ \times ۵ = ۵۰۰$

$[H^+] = ۱۰^{-۷}$

$pH = -\log_{۱۰}^{۱۰^{-۷}} = -۷\left(-\log_{۱۰}^{۱۰}\right) = ۷$

$pH = -\log [H^+]$

$[H^+] = ۱۰^{-۴}$

$pH = -\log_{۱۰}^{۱۰^{-۴}} = +۴$