Урок 2, задание 4

1) $\log_4 16 = \log_4 4^2 = 2$

2) $\log_5 \frac{1}{25} = \log_5 5^{-2} = -2$

3) $\log_5 25 = \log_5 5^2 = 2$

4) $\log_3 \sqrt{27} = \log_3 (27)^{\frac{1}{2}} = \log_3 (3^3)^{\frac{1}{2}} = \log_3 3^{\frac{3}{2}} = \frac{3}{2}$

5) $\log_2 12 - \log_2 3 = \log_2 \frac{12}{3} = \log_2 4 = \log_2 2^2 = 2$

6) $\log_6 12 + \log_6 3 = \log_6 36 = \log_6 6^2 = 2$

7) $e^{\ln 5} = e^{\log_e 5} = 5$

8) $\frac{\log_2 225}{\log_2 15} = \log_{15} 225 = \log_{15} 15^2 = 2$

9) $\log_4 32 + \log_{0,1} 10 = \frac{1}{2} \log_2 2^{16} + (-1) \log_{10} 10 = 8 - 1 = 7$

10) $9^{\log_3 \sqrt{5}} =$

$(3^2)^{\log_3 \sqrt{5}} = 3^{\log_3 \sqrt{5}^2} = \sqrt{5}^2 = 5$