4) задание

(6) $\log_4 16 = 2$

(7) $\log_5 \frac{1}{25} = -2$

(8) $\log_{25} 5 = \frac{1}{2}$ $(25 = 5^2)$

(9) $\log_3 \sqrt{24} = \log_3 3^{\frac{3}{2}} = \frac{3}{2}$

(10) $\log_2 12 - \log_2 3 = \log_2 \frac{12}{3} = 2$

(11) $\log_6 12 + \log_6 3 = \log_6 (12 \cdot 3) = \log_6 36 = 2$

(12) $e^{\ln 5} = 5$

(13) $\frac{\log_2 225}{\log_2 15} = \frac{\log_2 (25 \cdot 9)}{\log_2 (3 \cdot 5)} = \frac{\log_2 (3 \cdot 5)^2}{\log_2 (3 \cdot 5)} = 2$

(14) $\log_4 32 + \log_{0,1} 10 = \log_{2^2} 2^5 + \log_{0,1} (0,1)^{-1} =$

$= \log_4 (16 \cdot 2) + \underbrace{\log_{0,1} (0,1)^{-1}}_{-1} = \log_4 16 + \log_4 2 - 1 =$

$= 2 + \frac{1}{2} - 1 = \underline{\underline{1,5}}$

(15) $9^{\log_3 \sqrt{5}} = 3^{2 \cdot \log_3 \sqrt{5}} = 3^{\log_3 (\sqrt{5})^2} = 3^{\log_3 5} = 5$