

$$24. \log_8 1 = \log_8(8^0) = 0$$

$$26. \log 0.000001 = \log 10^{-6} = -6$$

$$28. \log_4 8 = \log_4(4^{3/2}) = \frac{3}{2}$$

$$30. 2^{\log_2 13} = 13$$

$$32. e^{2 \ln 7} = (e^{\ln 7})^2 = 7^2 = 49$$

$$34. \log_3 \sqrt{243} = \log_3(3^{5/2}) = \frac{5}{2}$$

$$36. \log_5 250 - \log_5 2 = \log_5 \frac{250}{2} = \log_5 125 = \log_5 5^3 = 3$$

$$38. \log_{10}(\log_{10} 10^{100}) = \log_{10} 100 = \log_{10} 10^2 = 2$$