Problem 1. Evaluate the exponential function

1. If $f(x) = 2^x$, find $f(4)$, $f(0)$, and $f(7)$.
2. If $d(x) = (\frac{1}{32})^x$, find $d(-1)$, $d(1)$, and $d(-0.5)$

Problem 2. Simplify the expressions

1. $\log_{25} 125$
2. $9^{\log_9 64}$
3. $e^{\ln 9} + \ln e$

Problem 3. Use the properties of logarithms to expand the expression

$$\ln \frac{p(q+4)^5}{r}$$

Problem 4. Use the properties of logarithms to write each expression as a single $\log$, if possible

$$5 \log_3 4w - 3 \log_3 5y + 2 \log_3 x$$

Problem 5. Solve each equations and round to the nearest hundredth, if needed.

1. $35 = 4(\frac{1}{5})^m - 1$

2. $\ln(x+5)^3 + 12 = 21$