

1. Simplify each expression as much as possible

a. $\log_2(128)$

c. $e^{3\ln(5)}$

b. $\log_3\left(\frac{4}{81}\right)$

d. $\ln(4e^2) - \ln(2e^{-3})$

2. Solve the given equation for x

a. $xe^{-3x} + 4e^{-3x} = 0$

b. $x^2 \ln(x) - 9 \ln(x) = 0$