Name: _____ | **Show work needed to justify your answer.** | Date: _____

HW: # 39d: Math IBSL - Standard 38 - Logarithms

5 points

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1 Simplify each expression:

  a $\ln e^3$ **b** $\ln e^4$ **c** $\ln \sqrt{e}$

  d $\ln \sqrt[3]{e}$ **e** $\ln \dfrac{1}{e}$ **f** $\ln \dfrac{1}{e^2}$

2 Simplify each expression:

  a $e^{\ln 2}$ **b** $e^{\ln 3}$ **c** $e^{\ln x}$

  d $e^{2\ln 4}$ **e** $e^{3\ln x}$ **f** $e^{-\ln 3}$

3 Solve each of these equations:

  a $\ln x = 2.7$ **b** $\ln(x+1) = 1.86$

4 Simplify the expression $e^{x\ln a}$ as far as possible.