$200 * e^x = 2000$

Logarithmieren:

$\ln (200 * e^x) = \ln 2000$

$\ln 200 + \ln e^x = \ln 2000$

$\ln 200 + x * \ln e = \ln 2000$

$\ln 200 + x = \ln 2000 \quad | -\ln 200$

x $= \ln 2000 - \ln 200 = 7,6009 - 5,2983$ **= 2,3**