LÖSUNG ZU 267:
b)

$y'(t) = 5y(t) \qquad y(-1) = 2$

$\frac{dy}{dt} = 5y$

$dy = 5y\,dt$

$\frac{1}{y}dy = 5\,dt$

$\int \frac{1}{y}dy = \int 5\,dt$

$\ln(y) = 5t + C$

$y(t) = e^{5t + C} = C_1 \cdot e^{5t}$

$y(-1) = C_1 \cdot e^{-5} = 2 \qquad \rightarrow \qquad C_1 = 2 \cdot e^5$

$y(t) = 2 \cdot e^5 \cdot e^{5t}$