$v = v_0 - kx$

$a = \frac{dv}{dt} = \frac{B\,ds}{dt} = Bv$

$\frac{dv}{dt} = Bv \Rightarrow \frac{dv}{v} = B\,dt$

$\int \frac{dv}{v} = \int B\,dt$

$\ln v = Bt + C$

При t_1, $v = v_1$, тогда

$\ln v_1 = Bt_1 + C \Rightarrow C = \ln v_1 - Bt_1$

$\ln v = Bt + \ln v_1 - Bt_1$

$\ln v = \ln e^{Bt} + \ln v_1 - \ln e^{Bt_1}$

$v = \frac{e^{Bt} \cdot v_1}{e^{Bt_1}} = v_1 \cdot e^{B(t-t_1)}$

$dA = F\,ds$; $F = ma = \mu \cdot Bv$;

$ds = v \cdot dt$

$dA = \mu \cdot B v^2 dt = \mu B v_1^2 \cdot e^{2B(t-t_1)} \cdot dt$

$A = \int_{t_1}^{t_2} \mu B v_1^2 \cdot e^{2B(t-t_1)} \cdot dt =$

$= \mu B v_1^2 \int_{t_1}^{t_2} e^{2B(t-t_1)}\,dt = \ldots$