

rechnung_umkehrintegrator

Student Group

First Name	Surname	Matrikel Nr.

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$SU_A = f(U_E)$	mit III.	
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = \textcolor{blue}{U_D} - U_C$	mit II. und I.	$\textcolor{blue}{U_D} = \{ 1 \text{ over } A_D \} \cdot \text{d} U_A \text{ over set } \{ A_D \rightarrow \infty \} \rightarrow 0$
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
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$U_A = \frac{1}{2} m v^2 - \textcolor{blue}{U_C}$	mit V.	$\textcolor{blue}{U_C} = \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_C \text{ dt} + Q_0(t_0) \right)$
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_C \text{ dt} + Q_0(t_0) \right)$	mit IV.	$\textcolor{blue}{I_C} = I_R$
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = \textcolor{blue}{U_C} - \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + Q_0(t_0) \right)$	Ausklammern	
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + Q_0(t_0) \right)$	Integrationskonstante betrachten	$\textcolor{blue}{Q_0(t_0)} = U_C(t_0) = -U_{A0}$
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + U_{A0} \right)$	mit VI. und II.	$\textcolor{blue}{I_R} = \{ U_R \text{ over } R \} = \{ U_E \text{ over } R \}$
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } C \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + U_{A0} \right)$	Konstante vorziehen	
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } R \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + U_{A0} \right)$	Zeitkonstante $\tau = R \cdot C$ einfügen	
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$
$U_A = - \{ 1 \text{ over } \tau \} \cdot \text{d} \left(\int_0^t I_R \text{ dt} + U_{A0} \right)$		
$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$	$\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m v^2 \right)$

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