

rechnung_signalzeitverlauf_umkehrintegrator

Student Group

First Name	Surname	Matrikel Nr.

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\$I.\quad\$ Am Punkt \$t_1\$

$U_A(t_1) = -\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	
$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$
$U_A(t_1) = -\frac{1}{5 \text{ k}\Omega \cdot 1 \mu\text{F}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$	
$\frac{1}{5 \text{ k}\Omega \cdot 1 \mu\text{F}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$	$\frac{1}{5 \text{ k}\Omega \cdot 1 \mu\text{F}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$
$U_A(t_1) = -\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + U_A(t_0)$	
$\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + U_A(t_0)$	$\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + U_A(t_0)$
$U_A(t_1) = -\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$	
$\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$	$\frac{1}{5 \text{ ms}} \cdot \int_0^{10\text{ms}} 1\text{V} dt + 0\text{V}$

\$I.\quad\$ Am Punkt \$t_2\$

$U_A(t_1) = -\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	
$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$
$U_A(t_1) = -\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-1\text{V}) dt + 2\text{V} = 0\text{V}$	
$\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-1\text{V}) dt + 2\text{V} = 0\text{V}$	$\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-1\text{V}) dt + 2\text{V} = 0\text{V}$

\$I.\quad\$ Am Punkt \$t_3\$

$U_A(t_1) = -\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	
$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$	$\frac{1}{\tau} \cdot \int_{t_0}^{t_1} U_E dt + U_A(t_0)$
$U_A(t_1) = -\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-2\text{V}) dt + 0\text{V} = -2\text{V}$	
$\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-2\text{V}) dt + 0\text{V} = -2\text{V}$	$\frac{1}{5 \text{ ms}} \cdot \int_{10\text{ms}}^{20\text{ms}} (-2\text{V}) dt + 0\text{V} = -2\text{V}$

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