

rechnung_signalzeitverlauf_umkehrintegrator

Student Group

First Name	Surname	Matrikel Nr.

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

$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{\tau} \int_{t_0}^{t_1} U_E \, dt + U_{\{A\}}(t_0)$	
$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{5 \text{ k}\Omega \cdot 1 \mu\text{F}} \int_{t_0}^{10\text{ms}} 1\text{V} \, dt + 0\text{V}$	
$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{5 \text{ ms}} \int_{t_0}^{10\text{ms}} 1\text{V} \, dt + U_{\{A\}}(t_0)$	
$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{5 \text{ ms}} \int_{t_0}^{10\text{ms}} 1\text{V} \, dt + U_{\{A\}}(t_0) = -2\text{V}$	

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

$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{\tau} \int_{t_0}^{t_1} U_E \, dt + U_{\{A\}}(t_0)$	
$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{5 \text{ ms}} \int_{t_0}^{10\text{ms}} (-1\text{V}) \, dt + 2\text{V} = 0\text{V}$	

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

$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{\tau} \int_{t_0}^{t_1} U_E \, dt + U_{\{A\}}(t_0)$	
$U_{\{A\}}(t_1) \setminus \setminus = -\frac{1}{5 \text{ ms}} \int_{t_0}^{10\text{ms}} (-2\text{V}) \, dt + 0\text{V} = -2\text{V}$	

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