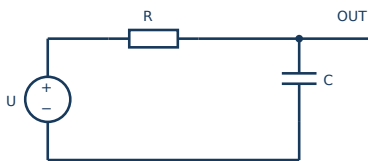


Name: _____ Datum / Date: _____ Klasse / Class: _____

- 01** RC low-pass: $R = 1 \text{ k}\Omega$, $C = 100 \text{ nF}$. Find cutoff with ideal source and unloaded output across C .



Concept diagram; values are in the task.

Method · units · working · check result

- 02** What voltage ratio and dB value does this low-pass have at cutoff?

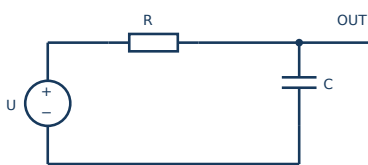
Method · units · working · check result

Name: _____ Datum / Date: _____ Klasse / Class: _____

03 Find this low-pass voltage ratio at ten times cutoff.

Method · units · working · check result

04 You want to halve the RC low-pass cutoff while retaining R. What changes?



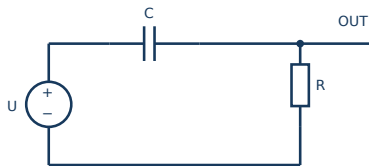
Concept diagram; values are in the task.

Method · units · working · check result

Filters and crossovers

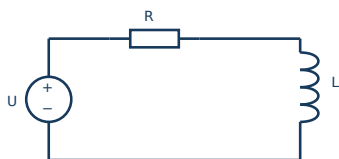
Worksheet · 20 tasks

Name: _____ Datum / Date: _____ Klasse / Class: _____

05 An RC high-pass has $R = 10 \text{ k}\Omega$ and target cutoff 100 Hz . Find C .

Concept diagram; values are in the task.

Method · units · working · check result

06 An ideal series inductor feeds a purely resistive 8Ω substitute driver. Target first-order electrical low-pass at 2 kHz . Find L .

Concept diagram; values are in the task.

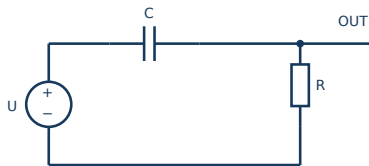
Method · units · working · check result

Filters and crossovers

Worksheet · 20 tasks

Name: _____ Datum / Date: _____ Klasse / Class: _____

07 An ideal series capacitor feeds $8\ \Omega$. Target first-order electrical high-pass at 2 kHz. Find C.



Concept diagram; values are in the task.

Method · units · working · check result

08 The substitute driver in task 7 is actually $6\ \Omega$; C is unchanged. What is the electrical cutoff?

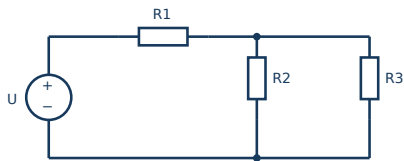
Method · units · working · check result

Filters and crossovers

Worksheet · 20 tasks

Name: _____ Datum / Date: _____ Klasse / Class: _____

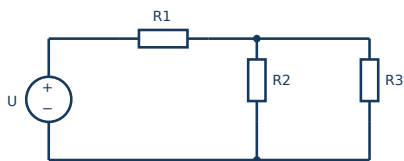
- 11** Constant-input-resistance L-pad: load $8\ \Omega$, $k = 0.5$. Find series and shunt resistors. Shunt is across load.



Concept diagram; values are in the task.

Method · units · working · check result

- 12** The L-pad in task 11 receives 8 V. Find load power and both resistor dissipations.



Concept diagram; values are in the task.

Method · units · working · check result

Name: _____ Datum / Date: _____ Klasse / Class: _____

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Name: _____ Datum / Date: _____ Klasse / Class: _____

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Name: _____ Datum / Date: _____ Klasse / Class: _____

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