

Inverting Operational Amplifier

Student Group

First Name	Surname	Matrikel Nr.

Table of Contents

Inverting Operational Amplifier 2
Gain of Op-Amp 2
Investigation of inverting input 3

Inverting Operational Amplifier

Gain of Op-Amp

Build the following circuit in [figure 1](#) with the power supply and a multimeter.



Fig. 1: Inverting Op-Amp

$U_{DD} = 10\text{ V}$, $U_{SS} = -10\text{ V}$, $R_1 = 10\text{ k}\Omega$

Calculate the necessary value for R_2 , so that the Output U_{OUT} is +5 V. Use the supply voltage of the operational amplifier for U_{IN} .

$U_{IN} =$

$$R_2$$

Investigation of inverting input

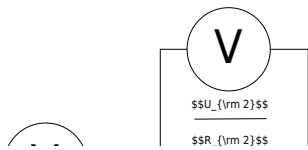


Fig. 2: Inverting Op-Amp: Investigate inverting input

$$U_{DD} = 10\text{V}, U_{SS} = -10\text{V}, R_1 = 10\text{k}\Omega$$

For U_{IN}, U_{OUT}, R_2 use the values from [figure 1](#).

Complete the arrows in the schematic of the circuit.
 Determine the the currents I_1 and I_2 indirectly through a voltage measurement.
 Calculate the sum of the currents at Node_1 .

$$I_{\text{1}} \approx I_{\text{2}}$$
$$I_{\text{2}} \approx I_{\text{3}}$$
$$I_{\text{3}} \approx I_{\text{4}}$$

- Virt masse messen
- r2 kurzschluss

From:

<https://wiki.mexle.org/> - MEXLE Wiki

Permanent link:

https://wiki.mexle.org/lab05_en/inverting_op-amp_basics_amplification?rev=1775056431

Last update: **2026/04/01 17:13**

