

# rechnung\_nichtinvertierender\_verstaerker

## Student Group

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|------------|---------|--------------|
|            |         |              |
|            |         |              |
|            |         |              |

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### \$I.\quad\$ Analysis of the Currents

|                |                                                             |                                                                              |
|----------------|-------------------------------------------------------------|------------------------------------------------------------------------------|
| by (2+3)       | $\{i_p\} = \{i_m\} = 0$                                     | therefore, $i_p$ and $i_m$ are defined                                       |
|                |                                                             |                                                                              |
| by (6)         | $\{i_o\} = i_1$                                             | $i_o$ is defined, when $i_1$ is defined                                      |
|                |                                                             |                                                                              |
| by (7) and (3) | $i_1 - i_2 - \{i\} = 0$                                     |                                                                              |
|                |                                                             |                                                                              |
|                | $i_1 = i_2 = i_o$                                           |                                                                              |
|                |                                                             |                                                                              |
|                |                                                             |                                                                              |
|                | $\{i_1\} = \{i_2\} = \{i_o\}$                               | with (8) and (9): $i_{\boxed{}} = \frac{U_{\boxed{}}}{R_{\boxed{}}}$ and (5) |
|                |                                                             |                                                                              |
|                | $\frac{U_1}{R_1} = \frac{U_2}{R_2} = \frac{U_A}{R_1 + R_2}$ | Voltage divider, $i = \text{const.}$                                         |
|                |                                                             |                                                                              |
| (10)           | $U_2 = U_A \cdot \frac{R_2}{R_1 + R_2}$                     | Voltage divider                                                              |
|                |                                                             |                                                                              |

## \$II.\quad\$ Analysis if the Voltage Amplification

[illegible]

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Last update: **2021/11/28 02:16**

