

# calc\_logic\_example

## Student Group

First Name	Surname	Matrikel Nr.

## Table of Contents

example for a simplification with the rule for boolean algebra

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

At first we will switch the representation to the following:

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

At first we will switch the representation to the following:

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

1.  $\color{blue}\{\text{Neutral Element}\}$

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

1.  $\color{blue}\{\text{Neutral Element}\}$

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

2.  $\color{blue}\{\text{Commutative Law}\}$

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$

2.  $\color{blue}\{\text{Commutative Law}\}$

$$\overline{a \vee (b \wedge (\bar{a} \vee c) \wedge 1) \vee a} \wedge \overline{ab} \wedge \overline{ab}$$





