calc_logic_example

Student Group

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example for a simplification with the rule for boolean algebra

$$\begin{align*} \begin{array}{ll} \overline{a \lor (b \land (\bar{a} \lor c) \land 1) \lor a} & \\ \quad\quad\quad\quad\quad\quad & \quad\quad\quad\quad\quad\quad \\ \end{array} \end{align*}$$

At first we will switch the representation to the following:

$$\begin{align*} \begin{array}{ll} \overline{a \lor (b \land (\bar{a} \lor c) \land 1) \lor a} & \color{white}{\overline{ab}} \\ \quad\quad\quad\quad\quad\quad & \quad\quad\quad\quad\quad\quad \\ \end{array} \end{align*}$$

At first we will switch the representation to the following:

$$\begin{align*} \begin{array}{ll} /(a + (b \cdot (/a + c) \cdot 1) + a) & \color{white}{\overline{ab}} \\ \quad\quad\quad\quad\quad\quad & \quad\quad\quad\quad\quad\quad \\ \end{array} \end{align*}$$

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

$$\begin{align*} \begin{array}{ll} /(a + (b \cdot (/a + c) \color{blue}{\cdot 1}) + a) & \\ \quad\quad\quad\quad\quad\quad & \color{white}{.} \\ \end{array} \end{align*}$$

example for a simplification with the rule for boolean algebra

$\overline{a \lor (b \land (\bar{a} \lor c) \land 1) \lor a}$

At first we will switch the representation to the following:

$/(a + (b \cdot (/a + c) \cdot 1) + a)$

so lets start $\color{white}{\quad\quad\quad} $

$/(a + (b \cdot (/a + c) \cdot 1) + a)$