calc_logic_example

Student Group

First Name	Surname	Matrikel Nr.

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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 \\ \color{white}{_____ \\ _____ \\ _____ \\ _

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

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

3. $\color{blue}{\text{Idempotence}}$

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

3. $\color{blue}{\text{Idempotence}}$

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

4. $\color{blue}{\text{Distributive Law}}$

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

4. $\color{blue}{\text{Distributive Law}}$

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

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