

## Übung: Boolesche Algebra

### 1 Vereinfachen Sie folgende Terme

#### 1.1

$$(\bar{A} \vee \bar{B}) \wedge (\bar{A} \vee B) \wedge (A \vee \bar{B})^1$$

#### 1.2

$$(A \wedge B) \vee (A \wedge C) \vee (B \wedge \bar{C})^2$$

#### 1.3

$$(A \wedge \bar{B}) \vee (A \wedge \bar{B} \wedge C)^3$$

#### 1.4

$$(A \vee \overline{B \wedge A}) \wedge (C \vee (D \vee C))^4$$

#### 1.5

$$(A \wedge B \wedge C) \vee (\bar{A} \wedge \bar{B} \wedge \bar{C}) \vee (A \wedge \bar{B} \wedge \bar{C})^5$$

#### 1.6

$$(\overline{A \wedge B \vee C}) \wedge (\bar{A} \vee B \vee \bar{C})^6$$

#### 1.7

$$\overline{\overline{A \wedge B \vee C} \vee (A \wedge C)}^7$$

#### 1.8

$$(A \vee B) \wedge (\bar{A} \vee B) \wedge (A \vee \bar{B}) \wedge (\bar{A} \vee \bar{B})^8$$

#### 1.9

$$A \vee (\bar{B} \wedge \overline{A \vee \bar{B} \vee C})^9$$

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<sup>1</sup>Lösung:  $\bar{A} \wedge \bar{B}$

<sup>2</sup> $(A \wedge C) \vee (B \wedge \bar{C})$

<sup>3</sup> $A \wedge \bar{B}$

<sup>4</sup> $C \vee D$

<sup>5</sup> $A \vee \bar{B} \wedge \bar{C}$

<sup>6</sup> $\bar{A} \vee \bar{C}$

<sup>7</sup> $A \wedge (B \vee C)$

<sup>8</sup>0

<sup>9</sup>A