**BOOLEAN LOGIC SUMMARY**

Operator Precedence

Complementation *(Highest)*

Parentheses

Multiplication

Addition *(Lowest)*

Additive Identities

A + 0 = A

A + 1 = 1

A + A = A

A + Ā = 1

Multiplicative Identities

0 • A = 0

1 • A = A

A • A = A

A • Ā = 0

Commutative Properties

A + B = B + A *Addition*

A • B = B • A *Multiplication*

Associative Properties

A + ( B + C ) = ( A + B ) + C *Addition*

A • ( B • C ) = ( A • B ) • C *Multiplication*

Distributive Property

A • ( B + C ) = A • B + A • C

Simplification Rules

A + A • B = A

A + Ā • B = A + B

( A + B ) • ( A + C ) = A + B • C

De Morgan’s Theorems

A • B = A + B

A + B = A • B

Complementation

Ā = A