

Basic

$$a \mid 0 = a \qquad a \mid a = a \qquad a \mid (a \& b) = a$$

$$a \mid 1 = 1 \qquad a \mid \sim a = 1 \qquad a \& (a \mid b) = a$$

$$a \& 0 = 0 \qquad a \& a = a$$

$$a \& 1 = a \qquad a \& \sim a = 0$$

$$a \wedge 0 = a \qquad a \wedge a = 0$$

$$a \wedge 1 = \sim a \qquad a \wedge \sim a = 1$$

Associative Law

$$(a \mid b) \mid c = a \mid (b \mid c)$$

$$(a \& b) \& c = a \& (b \& c)$$

$$(a \wedge b) \wedge c = a \wedge (b \wedge c)$$

Commutative Law

$$a \mid b = b \mid a$$

$$a \& b = b \& a$$

$$a \wedge b = b \wedge a$$

Distributive Law

$$a \mid (b \& c) = (a \mid b) \& (a \mid c)$$

$$a \& (b \mid c) = (a \& b) \mid (a \& c)$$

$$a \& (b \wedge c) = (a \& b) \wedge (a \& c)$$

De Morgan's Law

$$\sim(a \& b) = \sim a \mid \sim b$$

$$\sim(a \mid b) = \sim a \& \sim b$$