

Boolean Identities

In a few instances, the AND operation is represented by a dot (\cdot) for clarity.

$x + 0 = x$	identity	$x \cdot 1 = x$
$x + 1 = 1$	null	$x \cdot 0 = 0$
$x + x = x$	idempotence	$x \cdot x = x$
$x + \bar{x} = 1$	complementarity	$x \cdot \bar{x} = 0$
$\overline{(\bar{x})} = x$	involution	
$x + y = y + x$	commutative	$x \cdot y = y \cdot x$
$x + (y + z) = (x + y) + z$	associative	$x(yz) = (xy)z$
$x(y + z) = xy + xz$	distributive	$x + yz = (x + y)(x + z)$
$\overline{(x + y)} = \bar{x} \cdot \bar{y}$	deMorgan	$\overline{(xy)} = \bar{x} + \bar{y}$
$x + xy = x$	absorption	$x(x + y) = x$
$x + \bar{x}y = x + y$	no-name	$x(\bar{x} + y) = xy$
$xy + yz + \bar{x}z = xy + \bar{x}z$	consensus	$(x + y)(y + z)(\bar{x} + z) = (x + y)(\bar{x} + z)$