

$$\begin{array}{lcl}
x + 0 & = & x \\
x + 1 & = & 1 \\
x \cdot 0 & = & 0 \\
x \cdot 1 & = & x \\
x + x & = & x \\
x + x' & = & 1 \\
x \cdot x & = & x \\
x \cdot x' & = & 0 \\
(x')' & = & x \\
x \cdot y & = & y \cdot x \\
x + y & = & y + x \\
x \cdot (y \cdot z) & = & (x \cdot y) \cdot z \\
x + (y + z) & = & (x + y) + z \\
x \cdot (y + z) & = & (x \cdot y) + (x \cdot z) \\
x + (y \cdot z) & = & (x + y) \cdot (x + z) \\
x \cdot (x + y) & = & x \\
x + (x \cdot y) & = & x \\
(x \cdot y)' & = & x' + y' \\
(x + y)' & = & x' \cdot y'
\end{array}$$

Figure 25.1 Rules of Boolean algebra that can be used to simplify Boolean expressions.