

TABLE 2.2 BOOLEAN ALGEBRA POSTULATES AND THEOREMS

Expression	Dual
$P2(a) : a + 0 = a$	$P2(b) : a \cdot 1 = a$
$P3(a) : a + b = b + a$	$P3(b) : ab = ba$
$P4(a) : a + (b + c) = (a + b) + c$	$P4(b) : a(bc) = (ab)c$
$P5(a) : a + bc = (a + b)(a + c)$	$P5(b) : a(b + c) = ab + ac$
$P6(a) : a + \bar{a} = 1$	$P6(b) : a \cdot \bar{a} = 0$
$T1(a) : a + a = a$	$T1(b) : a \cdot a = a$
$T2(a) : a + 1 = 1$	$T2(b) : a \cdot 0 = 0$
$T3 : \bar{\bar{a}} = a$	
$T4(a) : a + ab = a$	$T4(b) : a(a + b) = a$
$T5(a) : a + \bar{a}b = a + b$	$T5(b) : a(\bar{a} + b) = ab$
$T6(a) : ab + a\bar{b} = a$	$T6(b) : (a + b)(a + \bar{b}) = a$
$T7(a) : ab + a\bar{b}c = ab + ac$	$T7(b) : (a + b)(a + \bar{b} + c) = (a + b)(a + c)$
$T8(a) : \overline{a + b} = \bar{a}\bar{b}$	$T8(b) : \overline{a\bar{b}} = \bar{a} + \bar{b}$
$T9(a) : ab + \bar{a}c + bc = ab + \bar{a}c$	$T9(b) : (a + b)(\bar{a} + c)(b + c) = (a + b)(\bar{a} + c)$
$T10(a) : f(x_1, x_2, \dots, x_n) = x_1 f(1, x_2, \dots, x_n) + \bar{x}_1 f(0, x_2, \dots, x_n)$	
$T10(b) : f(x_1, x_2, \dots, x_n) = [x_1 + f(0, x_2, \dots, x_n)][\bar{x}_1 + f(1, x_2, \dots, x_n)]$	