TABLE 5–2	Boolean Laws and Rules for the Reduction of Combinational Logic Circuits
Laws	
1	$A + B = B + A$
	$AB = BA$
2	$A + (B + C) = (A + B) + C$
	$A(BC) = (AB)C$
3	$A(B + C) = AB + AC$
	$(A + B)(C + D) = AC + AD + BC + BD$
Rules	
1	$A \cdot 0 = 0$
2	$A \cdot 1 = A$
3	$A + 0 = A$
4	$A + 1 = 1$
5	$A \cdot A = A$
6	$A + A = A$
7	$A \cdot \overline{A} = 0$
8	$A + \overline{A} = 1$
9	$\overline{\overline{A}} = A$
10 (a)	$A + \overline{A}B = A + B$
(b)	$\overline{A} + AB = \overline{A} + B$

De Morgan's theorem

$$\overline{A \cdot B} = \overline{A} + \overline{B}$$

$$\overline{A + B} = \overline{A} \cdot \overline{B}$$