TABLE 2-3
Laws of Boolean Algebra

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Operations with 0 and 1:	
1. $X + 0 = X$	1D. $X \cdot 1 = X$
2. $X + 1 = 1$	2D. $X \cdot 0 = 0$
Idempotent laws:	
3. $X + X = X$	3D. $X \cdot X = X$
Involution law:	
4. $(X')' = X$	
Laws of complementarity:	
5. $X + X' = 1$	5D. $X \cdot X' = 0$
Commutative laws:	
6. $X + Y = Y + X$	6D. $XY = YX$
Associative laws:	
7. $(X + Y) + Z = X + (Y + Z) = X + Y + Z$	7D. $(XY)Z = X(YZ) = XYZ$
Distributive laws:	
8. $X(Y + Z) = XY + XZ$	8D. $X + YZ = (X + Y)(X + Z)$
DeMorgan's laws:	
9. $(X + Y)' = X'Y'$	9D. $(XY)' = X' + Y'$

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TABLE 2-4
Theorems of Boolean Algebra

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Uniting theorems:	
1. $XY + XY' = X$	1D. $(X + Y)(X + Y') = X$
Absorption theorems:	
2. $X + XY = X$	2D. $X(X + Y) = X$
Elimination theorems:	
3. $X + X'Y = X + Y$	3D. $X(X' + Y) = XY$
Duality:	
4. $(X + Y + Z + \cdots)^D = XYZ\ldots$	4D. $(XYZ\ldots)^D = X + Y + Z + \cdots$
Theorems for multiplying out and factoring:	
5. $(X + Y)(X' + Z) = XZ + X'Y$	5D. $XY + X'Z = (X + Z)(X' + Y)$
Consensus theorems:	
6. $XY + YZ + X'Z = XY + X'Z$	6D. $(X + Y)(Y + Z)(X' + Z) = (X + Y)(X' + Z)$

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