Boolean Laws and Theorems

$F_{(a,b,c)} = (A + C)(AB + AB') + AC + C$

$= (AAB + AAB') + (CAB + CAB') + AC + C$ Distributive Law

$= (AB + AB') + (CAB + CAB') + AC + C$ Idempotent Law

$= (CAB + CAB') + AC + C$ Absorption Law

$= (CAB + CAB') + C$ Associative Law

$= AC + C$ Domination Law

$= A + C$ Domination Law