Identity Law

- **I*dentity Law for OR (Addition):***

  E*xpression:*

  $A + 0 = A$

  E*xplanation:* This means that if you OR (add) any Boolean variable A with 0 (false), the result is the original variable A In other words, OR-ing with 0 does not change the value of A

- **I*dentity Law for AND (Multiplication)*** :

  E*xpression:*

  $A \cdot 1 = A$

  E*xplanation:* Explanation: This means that if you AND (multiply) any Boolean variable $A$with 1 (true), the result is the original variable A. In other words, AND-ing with 1 does not change the value of A

Null Law

E*xpression:*

$A + 1 = 1$

$A \cdot 0 = 0$

E*xplanation:* For the Null Law of OR (addition), if A is 1 and you add 1, the result is 1, not 0. This is because in Boolean algebra, the OR operation is defined such that any variable OR-ed with 1 results in 1. It's like saying if either condition is true, the outcome is true regardless of the other condition.

Itempotent Law

E*xpression:* $A + 1 = 1$ **E*xpression:*** $A \cdot 0 = 0$ **E*xplanation:*** For the Null Law of OR (addition), if A is 1 and you add 1, the result is 1, not 0. This is because in Boolean algebra, the OR operation is defined such that any variable OR-ed with 1 results in 1. It's like saying if either condition is true, the outcome is true regardless of the other condition.