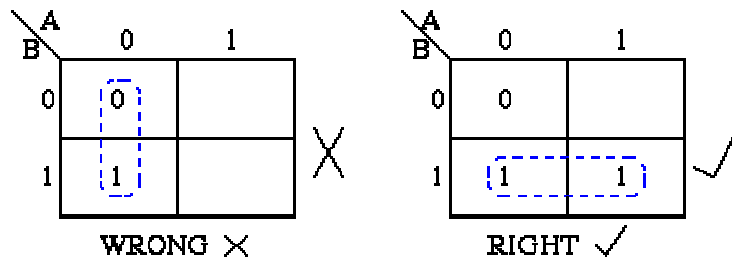


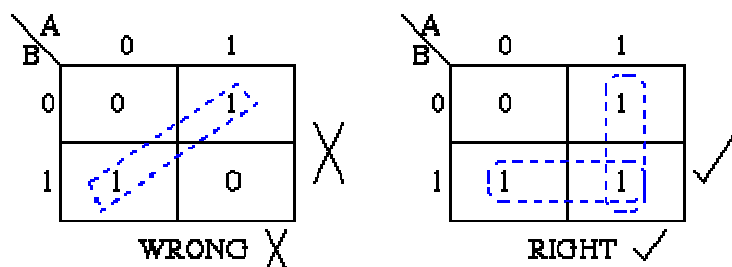
RULES FOR THE SIMPLIFICATIONS

The Karnaugh map uses the following rules for the simplification of expressions by *grouping* together adjacent cells containing *ones*

- Groups may not include any cell containing a zero



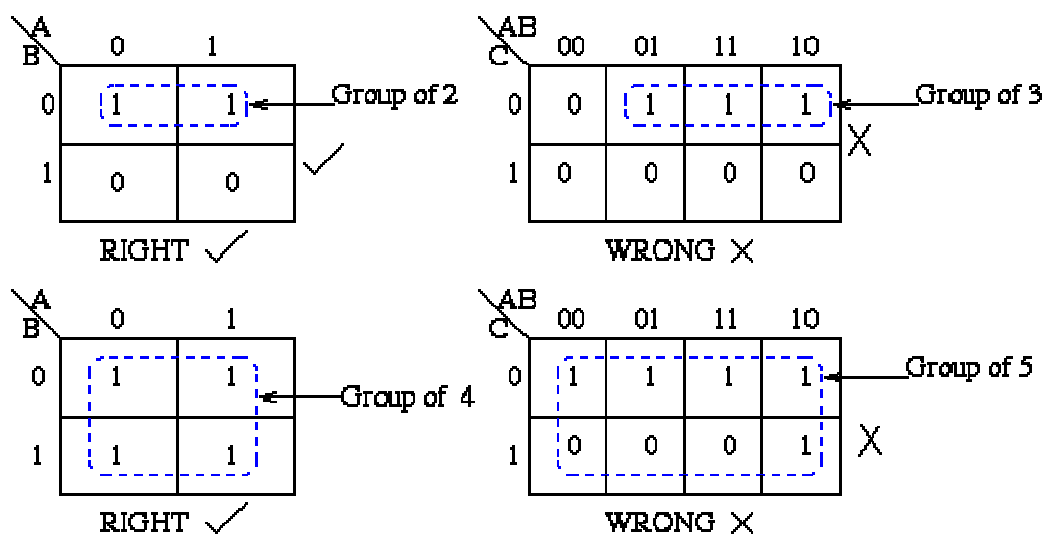
- Groups may be horizontal or vertical, but not diagonal.



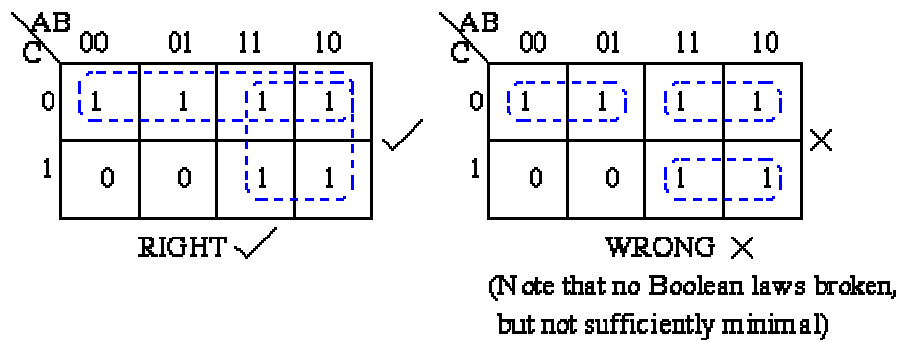
- Groups must contain 1, 2, 4, 8, or in general 2^n cells.

That is if $n = 1$, a group will contain two 1's since $2^1 = 2$.

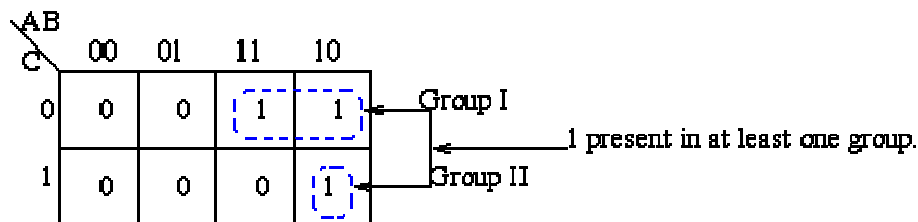
If $n = 2$, a group will contain four 1's since $2^2 = 4$.



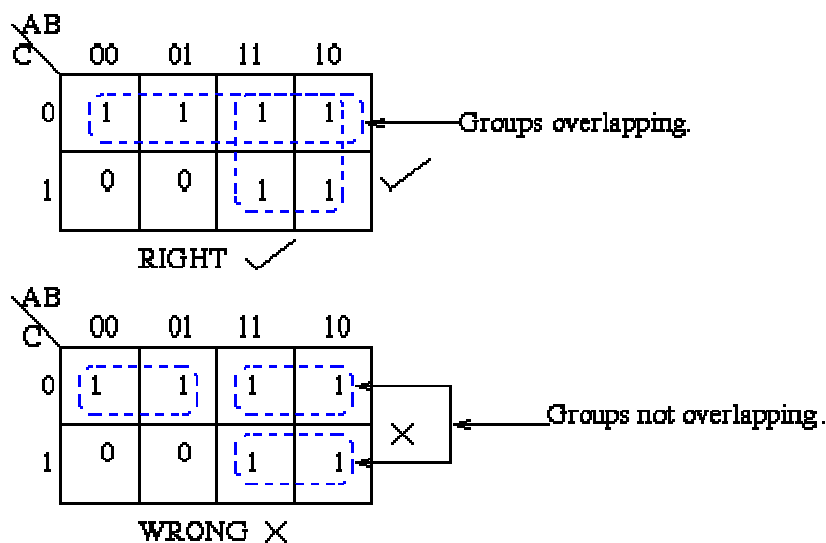
- Each group should be as large as possible.



- Each cell containing a *one* must be in at least one group.

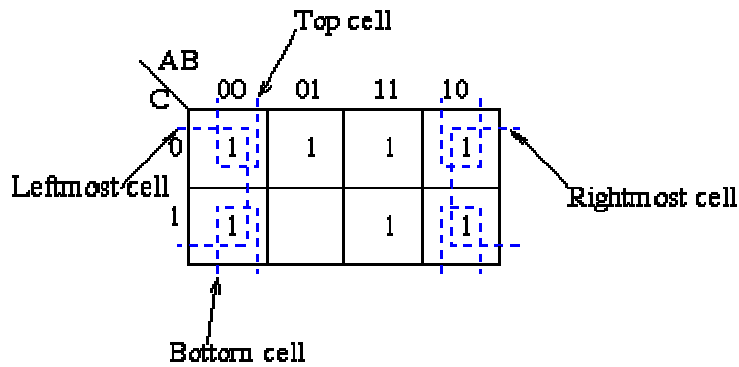


- Groups may overlap.



- Groups may wrap around the table. The leftmost cell in a row may be grouped with the rightmost cell and the top cell in a column may be grouped

with the bottom cell.



- There should be as few groups as possible, as long as this does not contradict any of the previous rules.

