

EXAMPLE 3-13

THE ANALYSIS AND SYNTHESIS OF LOGIC CIRCUITS

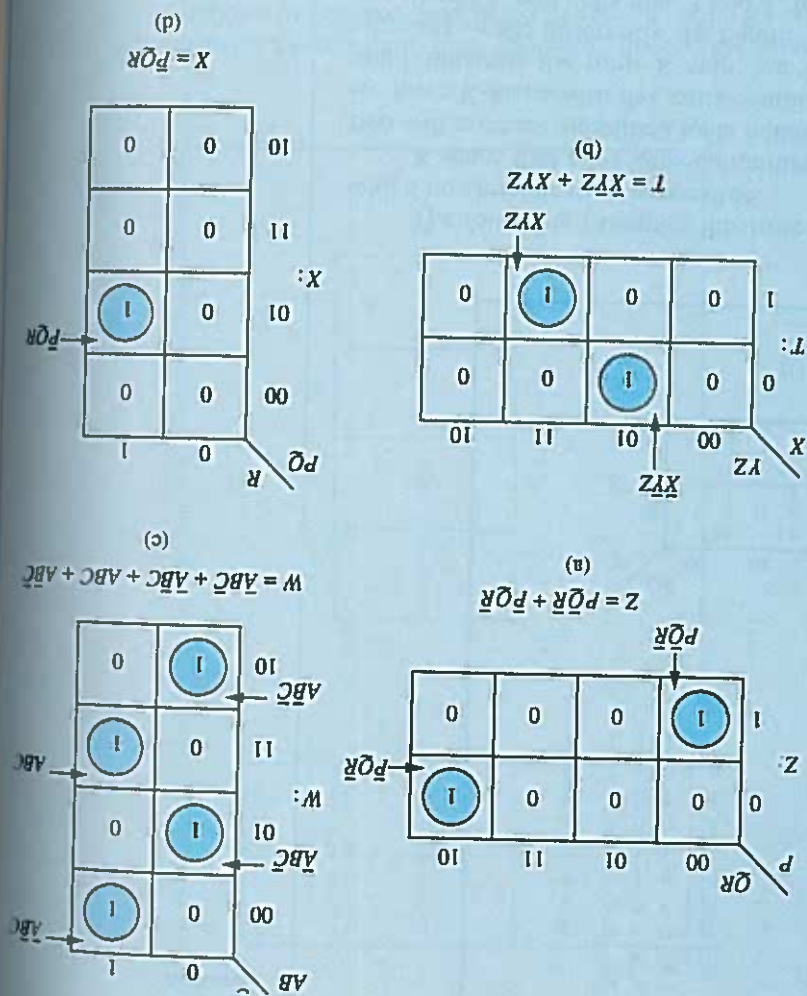


Figure 3-52

Examples of K-maps that cannot be simplified.

changes). Similarly, the variables B and C remain constant in the group made up of cells nos. 3 and 7. Since the values of B and C correspond to 00 and 11 for each group, respectively, the common variables are $\bar{B}\bar{C}$ for adjacent cells nos. 0 and 4

and

BC for adjacent cells nos. 3 and 7

Since we will be obtaining the simplified sum-of-products equation from the K-map, each group will produce the logical product of the variables that remain constant, and we will take the logical sum of these products to obtain the final logic equation.