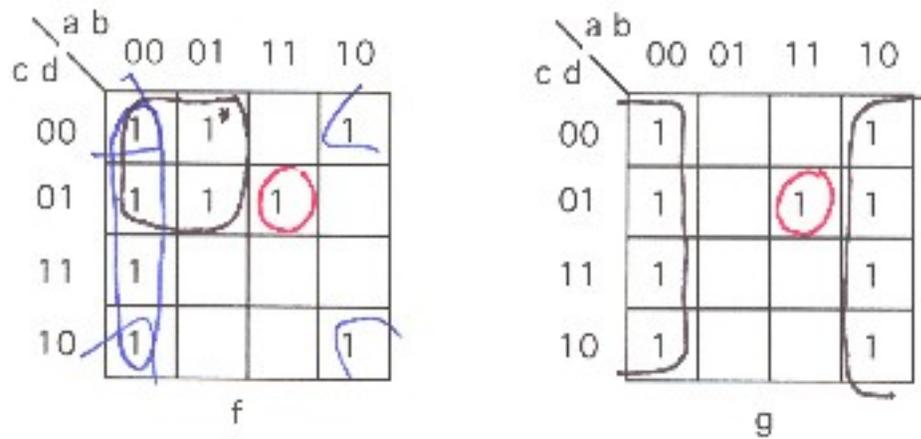


## Homework 10 Solutions

11 b.



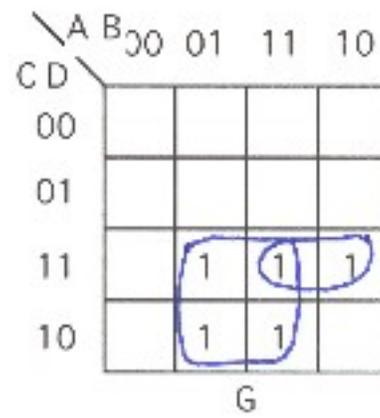
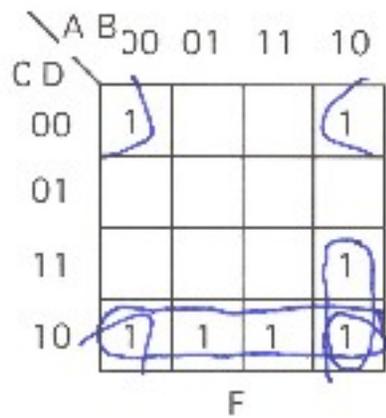
Once we have chosen the essential prime implicants for f ( $a'c'$ ) and g ( $b'$ ), then  $m_{13}$  can be covered by the minterm and, since g is covered, prime implicants are used for f.

$$f = \underline{a'c'} + \underline{abcd'} + \underline{a'b'} + \underline{b'd'}$$

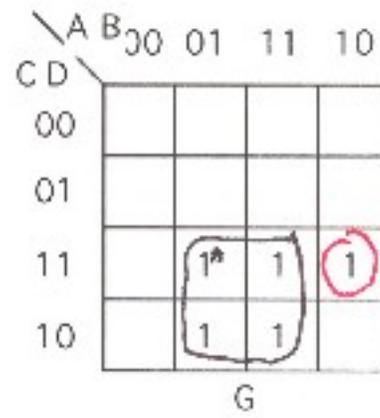
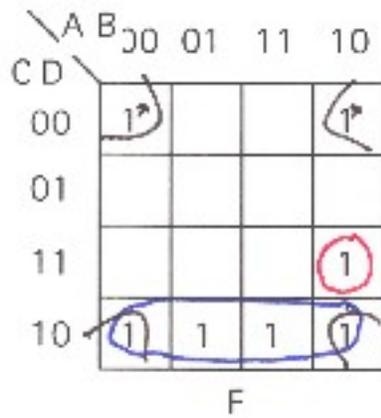
$$g = \underline{b'} + \underline{abcd'}$$

## Homework 10 Solutions

12 a.



After covering four 1's in each function with essential prime implicants where sharing is impossible, the one shared term becomes obvious, and the last two 1's of f are covered by one of the original terms,  $C D'$ .



$$F = \underline{B'D'} + \underline{AB'CD} + \underline{CD'}$$

$$G = \underline{BC} + \underline{AB'CD}$$