

2.2 Simplify the following Boolean expressions to a minimum number of literals:

- (e) $(a + b + c')(a'b' + c)$
- (f) $a'bc + abc' + abc + a'bc'$

2.4 Reduce the following Boolean expressions to the indicated number of literals:

- (d) $(A' + C)(A' + C')(A + B + C'D)$ to four literals
- (e) $ABC'D + A'BD + ABCD$ to two literals

2.9 Find the complement of the following expressions:

- (c) $z + z'(v'w + xy)$

2.11 List the truth table of the function:

- (b) $F = bc + a'c'$

2.14 Implement the Boolean function

$$F = xy + x'y' + y'z$$

- (b) With OR and inverter gates
- (c) With AND and inverter gates

2.22 Convert each of the following expressions into sum of products and product of sums:

- (b) $x' + x(x + y')(y + z')$

2.28 Write Boolean expressions and construct the truth tables describing the outputs of the circuits described by the logic diagrams in Fig. P2.28.

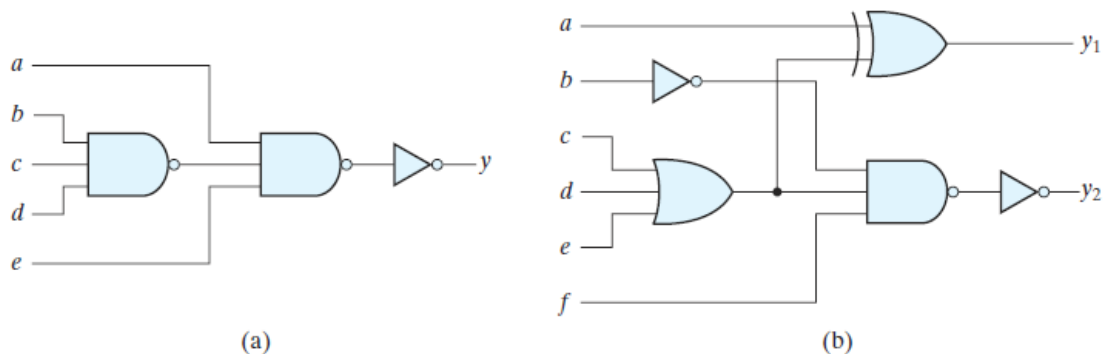


FIGURE P2.28