

9.1 see p.741 in the textbook

9.4 see p.742 in the textbook

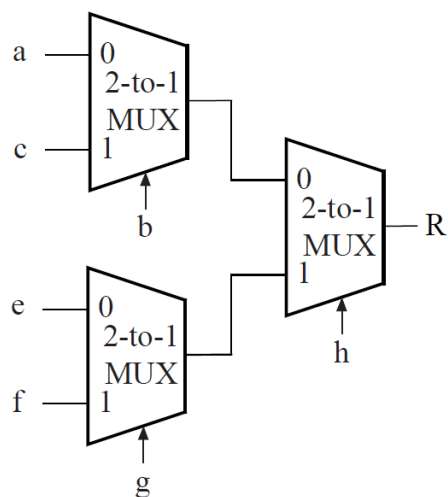
9.8 see p.743-744 in the textbook

9.13

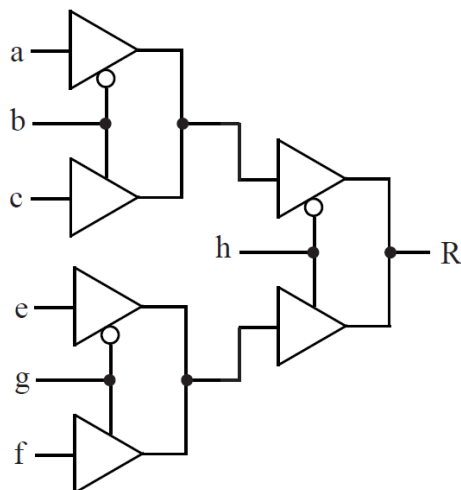
$$F = b'(ade' + a'cd'e) + b(c'd'e + a'd'e + ac'de')$$

9.14

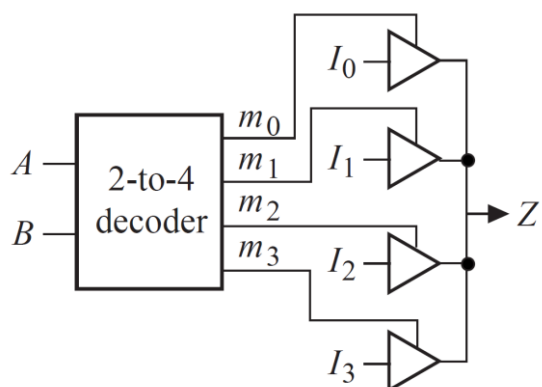
(a)



(b)

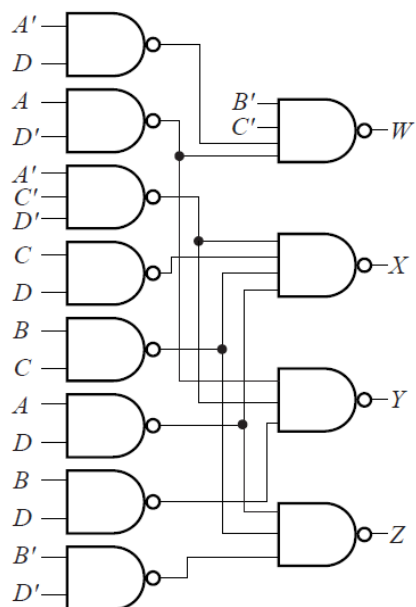


9.24



9.32

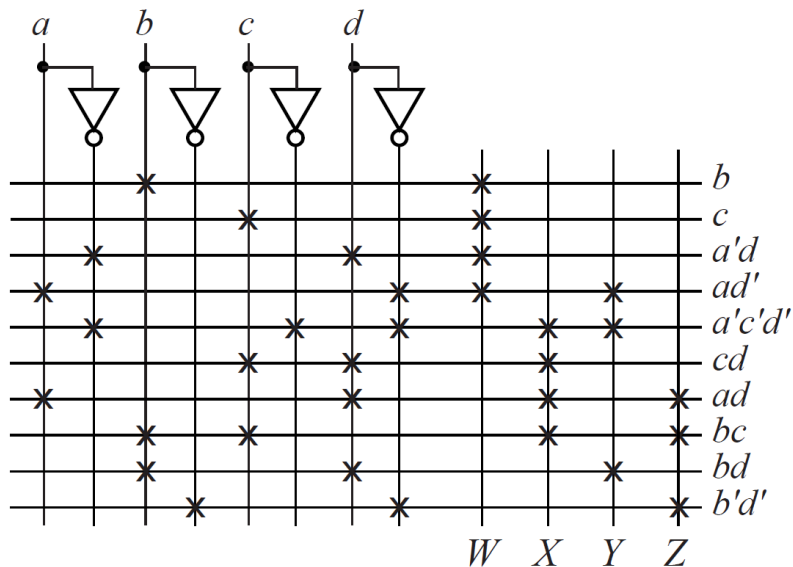
(a)



(b)

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>WX</i>	<i>YZ</i>
-	1	-	-	1	0 0 0
-	-	1	-	1	0 0 0
0	-	-	1	1	0 0 0
1	-	-	0	1	0 1 0
0	-	0	0	0	1 1 0
-	-	1	1	0	1 0 0
1	-	-	1	0	1 0 1
-	1	1	-	0	1 0 1
-	1	-	1	0	0 1 0
-	0	-	0	0	0 0 1

(c)



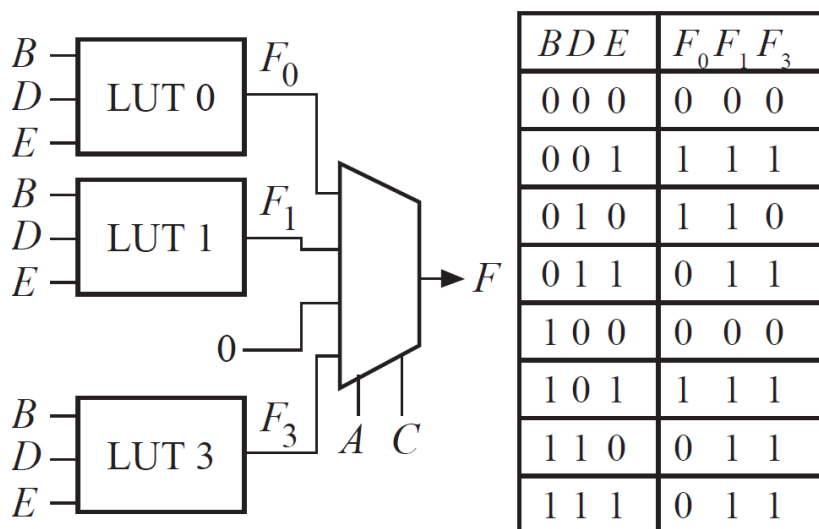
9.36

(a) $F = A'B'(CD'E + CDE + D'E + DE') + A'B(CD'E + CDE + D'E + CD) + AB'(CD'E + CDE) + AB(CD'E + CDE + CD)$

(b) $F = B'C'(A'D'E + A'DE') + B'C(D'E + DE + A'D'E + A'DE') + BC'(A'D'E) + BC(D'E + DE + A'D'E + D)$

(c) $F = A'C'(D'E + B'DE') + A'C(D'E + DE + D'E + B'DE' + BD) + AC'(0) + AC(D'E + DE + BD)$

(d) $F = A'C'(D'E + B'DE') + A'C(D'E + DE + D'E + B'DE' + BD) + AC'(0) + AC(D'E + DE + BD)$
 $= A'C'(F_0) + A'C(F_1) + AC'(0) + AC(F_3)$



9.44

(a) $f(a, b, c) = ab' + b'c' = b'(ac' + ac + a'c')$

b' must be connected to w .

If $s = a$, $t = c$, then connect y_0 , y_2 and y_3 to a 3-input OR-gate.

If $s = c$, $t = a$, then connect y_0 , y_1 and y_3 to a 3-input OR-gate.

9.46

(a) $f(A, B, C, D) = AC' + BD' + B'D + A'C$

(b) $f(A, B, C, D) = A'B'C'D' + A'BC'D + AB'CD' + ABCD$