# UNIVERSITY OF THESSALY

## ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT

DIGITAL DESIGN

***3rd Homework Set***

1. Simplify the expressions:
    a. $F(w, x, y, z) = \Sigma (0, 1, 3, 7, 9, 12, 13, 14, 15)$
    b. $F(w, x, y, z) = \Sigma (1, 3, 5, 7, 9, 13, 15)$
    c. $F(w, x, y, z) = \Sigma(7, 8, 9, 10, 11, 12, 14)$
    d. $F(w, x, y, z) = \Sigma(4, 5, 6,11, 12, 13, 14)$
2. Simplify the expressions:
    a. $F(A, B, C, D) = \Sigma(2, 3, 5, 9, 11) + d(8, 14)$
    b. $F(A, B, C, D) = \Sigma(2, 3, 6, 7, 10) + d(13, 14)$
    c. $F(A, B, C, D) = \Sigma(1, 3, 5, 9, 13) + d(7, 14)$
    d. $F(A, B, C, D) = \Sigma(8, 9, 10, 12, 13) + d(7, 14)$
    e. $F(A, B, C, D) = \Sigma(1, 3, 5, 9, 13) + d(11, 14)$
    f. $F(A, B, C, D) = \Sigma(1, 3, 5, 7, 9) + d(11, 14)$