# Logic Design - Homework 3

**(1)** Prove the identity of each of the following Boolean equations using algebraic manipulation.
(a) X'Y' + X'Y + XY = X'+Y
(b) A'B + B'C' + AB + B'C = 1
(c) Y + X'Z + XY' = X +Y + Z

**(2)** Simplify the following expressions by using Boolean algebra.
(a) F= (X(Y'+V+X'))'+((X+Z'+W')(Y+V+W'))'
(b) F = X+Y(Z+(X+Z)')
(c) F= WX(Z+YZ)+X(W+WYZ)