

Logic Design – Homework 3

(1) Draw the logic diagram for the following Boolean expressions:

(a) $XYZ' + XY' + X'Z$

(b) $X + X'(X' + Y) + (Y' + Z)$

(2) 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) $Y + X'Z + XY' = X + Y + Z$