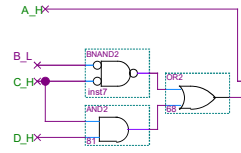
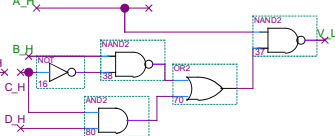


3701 HW 1 Solutions

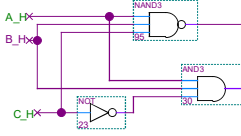
1 A) $V = A * [(B*/C) + C*D]$



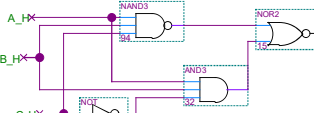
2 A) $V = A * [(B*/C) + C*D]$



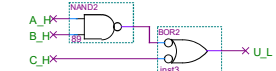
1 B) $W = A*B*/C + (A*B*C)$



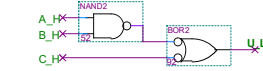
2 B) $W = A*B*/C + (A*B*C)$



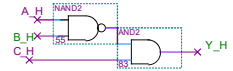
1 C) $U = /(A*B + /C)$



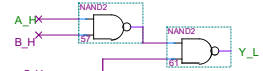
2 C) $U = /(A*B + /C)$



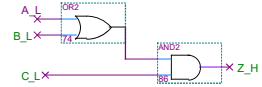
1 D) $Y = /(A*B) * C$



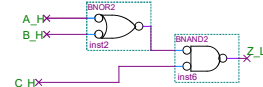
2 D) $Y = /(A*B) * C$



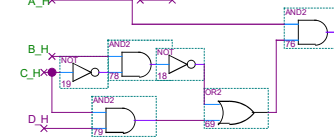
1 E) $Z = (A + /B) * /C$



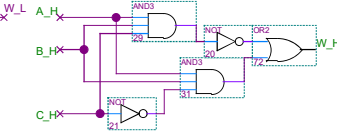
2 E) $Z = (A + /B) * /C$



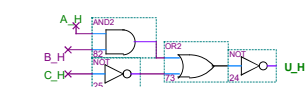
3 A) $V = A * [(B*/C) + C*D]$



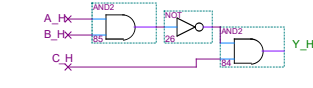
3 B) $W = A*B*/C + (A*B*C)$



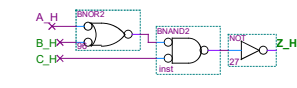
3 C) $U = /(A*B + /C)$



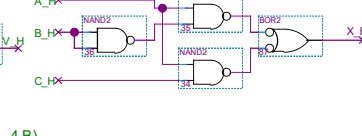
3 D) $Y = /(A*B) * C$



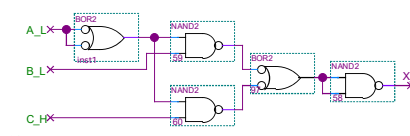
3 E) $Z = (A + /B) * /C$



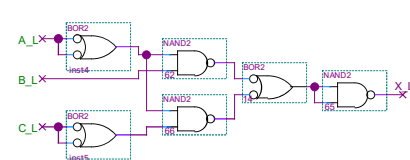
4 A) $X = A*/B + A*C$



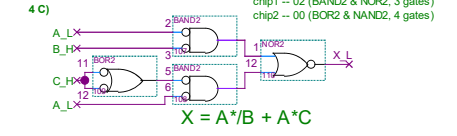
4 B) $X = A*/B + A*C$



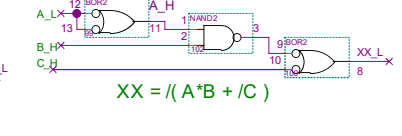
4 C) $X = A*/B + A*C$



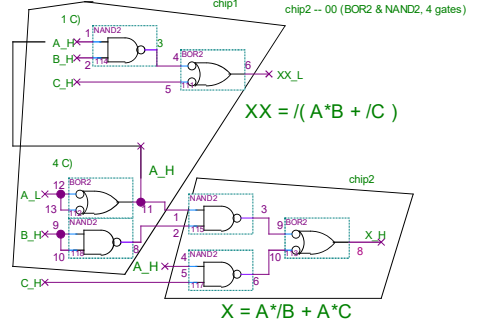
5 (Solution with 7 gates)



1 C)



5 (Alternative solution with 8 gates)



Notes: Quartus has no Level Shifter with bubble on input side. The _H in inputs and outputs is NOT necessary.