

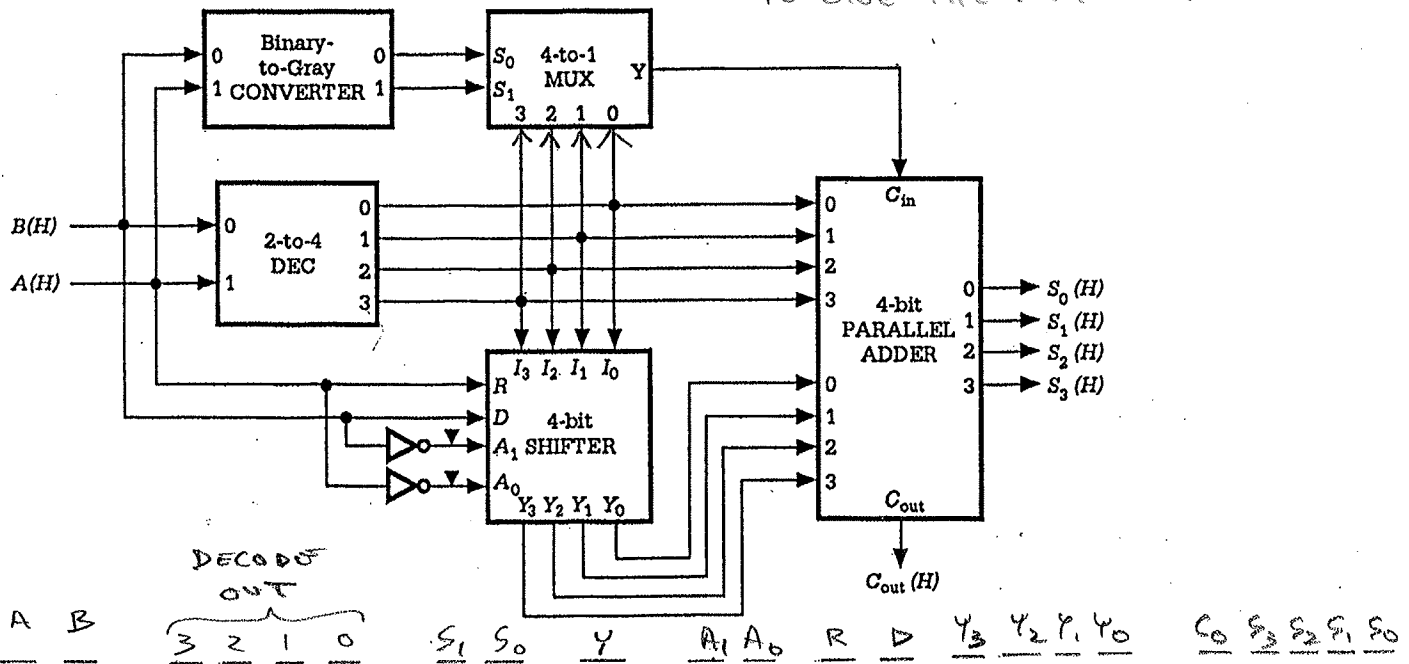
HW # 3

(a) Complete the following truth table:

A	B	C_{out}	S_3	S_2	S_1	S_0
0	0					
0	1					
1	0					
1	1					

SHOW YOUR WORK BELOW THE DIAGRAM

b) FIND A SIMPLER CIRCUIT TO GIVE THE SAME RESULT



NOTE RE HW #3

SHIFTER INPUTS

FUNCTION

R=0

SHIFT

R=1

ROTATE

D=0

DIRECTION IS LEFT

D=1

DIRECTION IS RIGHT

A, A₀

TOGETHER DEFINES THE NUMBER OF POSITIONS TO SHIFT OR ROTATE

0 0 = NONE

0 1 = 1

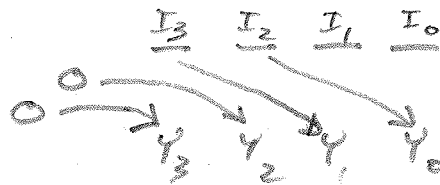
1 0 = 2

1 1 = 3

WHEN SHIFTING, ZEROS ARE PLACED IN "EMPTY" DIGITS.

EXAMPLE:

R=0, D=1, A, A₀ = 10



0 0 "I₃" "I₂"

← RESULTING SHIFTER OUTPUT