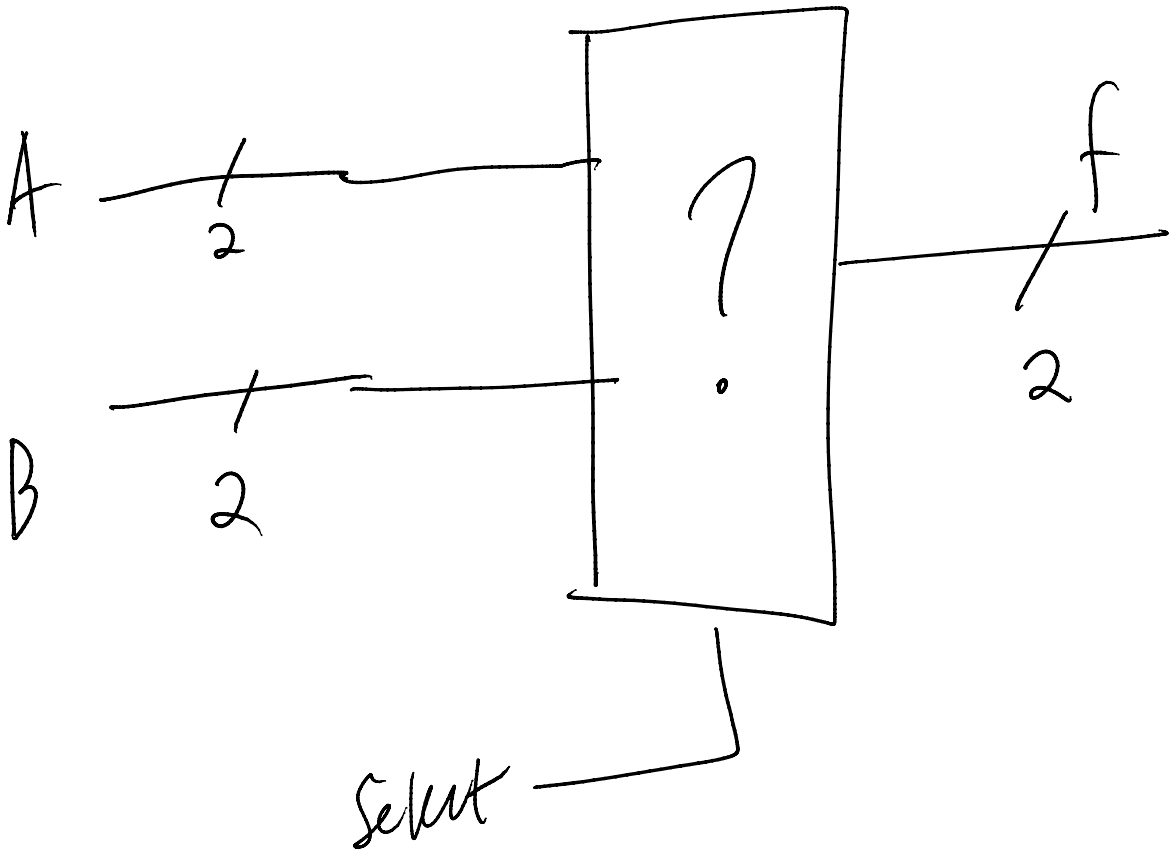
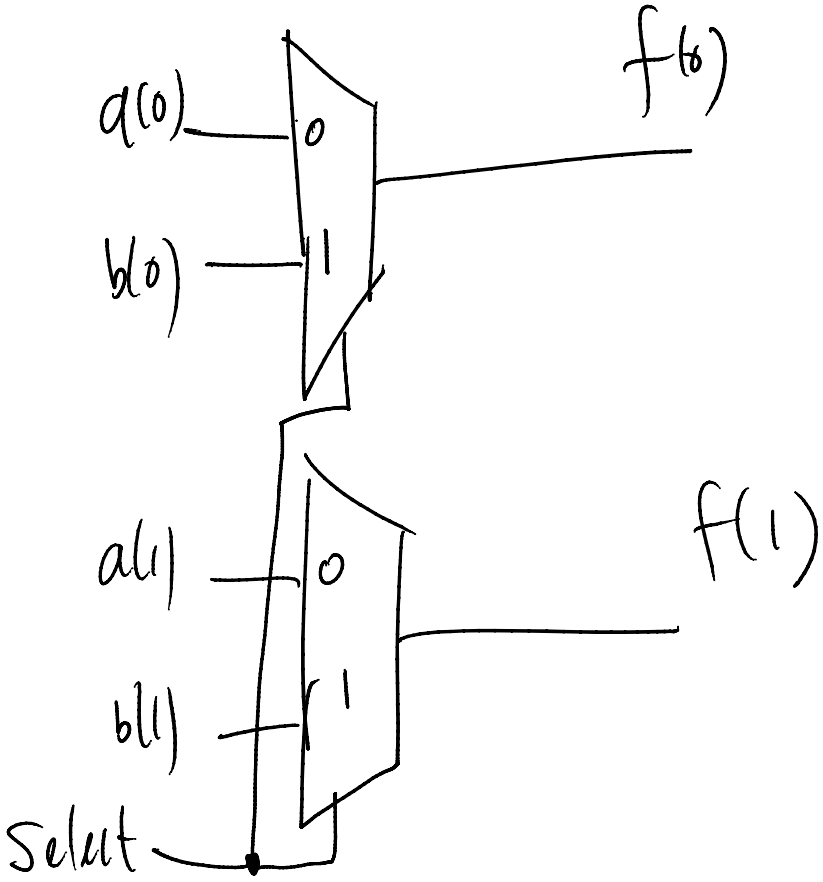
Monday, March 09, 2009
1:37 PM

2 2-to-1 mux





Monday, March 09, 2009
1:37 PM

comparator

$A = a_3 a_2 a_1 a_0$ $B = b_3 b_2 b_1 b_0$

XNOR

$I_i = a_i \odot b_i$

equal a_i, b_i → I_i ?

$a_3 a_2 a_1 a_0$ → 1???, 01??

$b_3 b_2 b_1 b_0$ → 0???, 00??

$a_3 a_2 a_1 a_0$ → 001?, 0001

$b_3 b_2 b_1 b_0$ → 000?, 0000

$\bar{a_3} b_3 + I_3 a_2 \bar{b_2} + I_3 I_2 a_1 \bar{b_1} + I_3 I_2 I_1 a_0 \bar{b_0}$

Monday, March 09, 2009
1:37 PM

$f(w_1, w_2, w_3) = \sum m(0, 1, 3, 4, 6, 7)$

by using a 3-to-8 decoder and an OR gate.