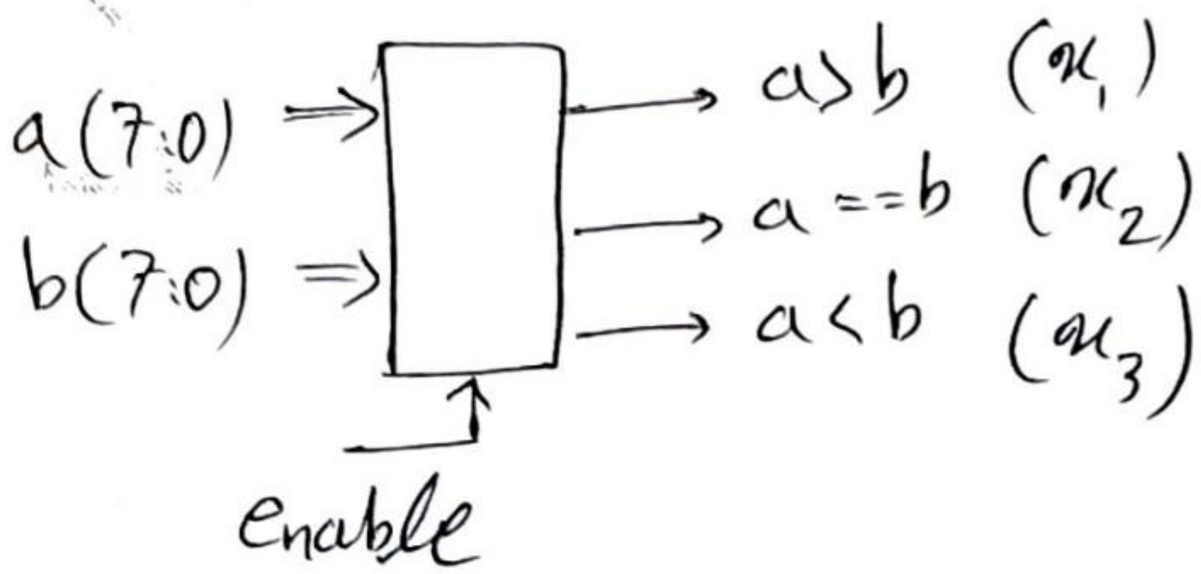
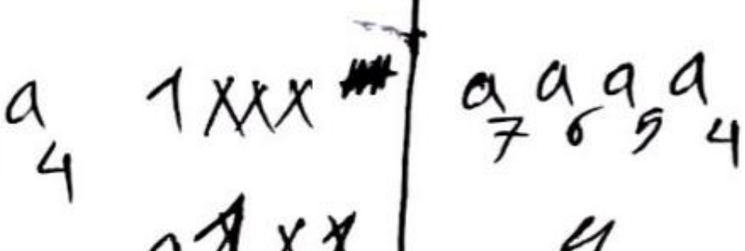
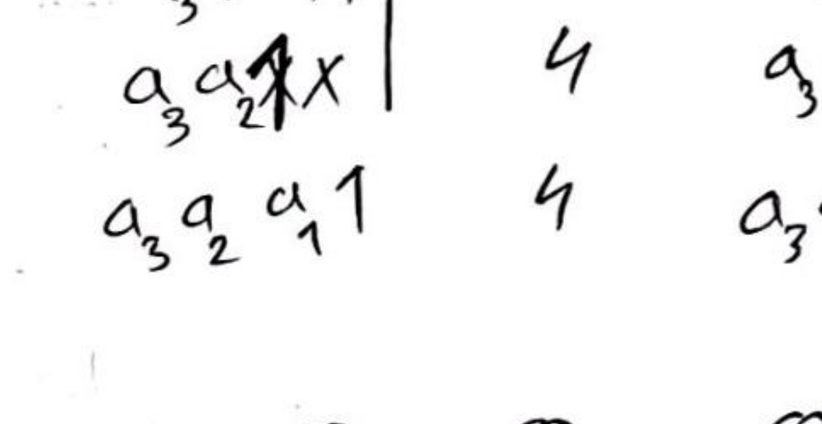


Q.1

a_7-a_4	a_3-a_0	b_7-b_4	b_3-b_0	
1xxx	xxxx	0xxx	xxxx	①
$a_7$1xx	xxxx	$a_7$0xx	xxxx	②
$a_7a_6$1x	xxxx	$a_7a_6$0x	xxxx	③
$a_7a_6a_5$1	xxxx	$a_7a_6a_5$0	xxxx	④
$a_7a_6a_5a_4$	1xxx	$a_7a_6a_5a_4$	0xxx	⑤
〃	$a_3$1xx	〃	$a_3$0xx	⑥
〃	$a_3a_2$1x	〃	$a_3a_2$0x	⑦
〃	$a_3a_2a_1$1	〃	$a_3a_2a_1$0	⑧

$(a>b)\,x_1 \equiv$ ① OR ② OR ③ ... OR ⑧

① ≡ 

② ≡ 

③ 

$$\pi_2\,(a==b) \equiv (a_7 b_7) \underset{\&}{\text{AND}} (a_6 b_6) \,\&\, (a_5 b_5) \,\&\, \cdots \,\&\, (a_0 b_0)$$

$\pi_3\,(a<b)$: