

$x_1$	$a_7-a_4$	$a_3-a_0$	$b_7-b_4$	$b_3-b_0$	
	1xxx	xxxx	0xxx	xxxx	①
	$a_7$ 1xx	xxxx	$a_7$ 0xx	xxxx	②
	$a_7 a_6$ 1x	xxxx	$a_7 a_6$ 0x	xxxx	③
	$a_7 a_6 a_5$ 1	xxxx	$a_7 a_6 a_5$ 0	xxxx	④
	$a_7 a_6 a_5 a_4$ 1xxx		$a_7 a_6 a_5 a_4$ 0xxx		⑤
	11	$a_3$ 1xx	1	$a_3$ 0xx	⑥
	1	$a_3 a_2$ 1x	1	$a_3 a_2$ 0x	⑦
	1	$a_3 a_2 a_1$ 1	1	$a_3 a_2 a_1$ 0	⑧

$$(a > b) x_1 \equiv ① \text{ OR } ② \text{ OR } ③ \dots \text{ OR } ⑧$$

①  $\equiv$  ~~xxxx~~  $\frac{a_7}{b_7} = 1 \rightarrow ①$

②  $\equiv$

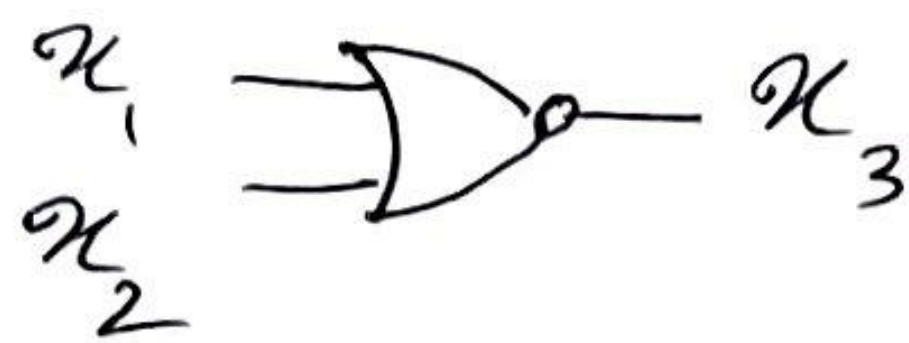
$a_7, b_7 \Rightarrow$  (XOR)  
 $a_6, b_6 \Rightarrow$  (XOR)  
 AND of the two XOR outputs  $\rightarrow ②$

③

$a_7, b_7 \Rightarrow$  (XOR)  
 $a_6, b_6 \Rightarrow$  (XOR)  
 AND of the two XOR outputs  $\rightarrow ③$

$$K_2(a=b) \equiv (a_7b_7) \text{ AND } (a_6b_6) \text{ \& } (a_5b_5) \text{ \& } \dots \text{ \& } (a_0b_0)$$

$K_3(a < b) :$



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