

$\star G_i$  doesn't have to be inverted, it gets inverted for free here. if  $G_i = 0, S_i = 1$   
 $G_i = 1, S_i = 0$

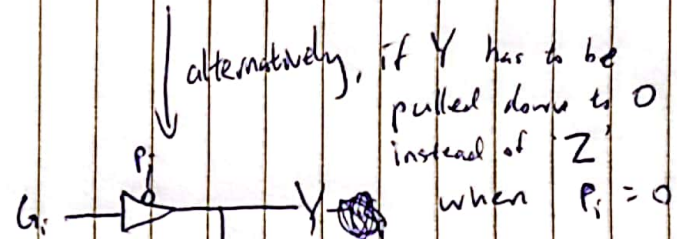
total: 6 transistors (AND)  
 + 2 transistors  
 + # transistors in XOR

$\bar{G}_i$ : 2 transistors

total: 5 transistors  
 + ? transistors for XOR

total:  $2 \times ?$   
 # transistors in XOR

A	B	P	$\bar{G}$	$A \oplus B$
0	0	0	0	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	0



alternatively, if Y has to be pulled down to 0 instead of 'Z' when  $P_i = 0$

~~$\star Y$  and  $S_i$  are the same thing.~~

tristate buffer: 6 transistors

Pull down PMOS: 1 transistor

total: 7 + # transistors in XOR