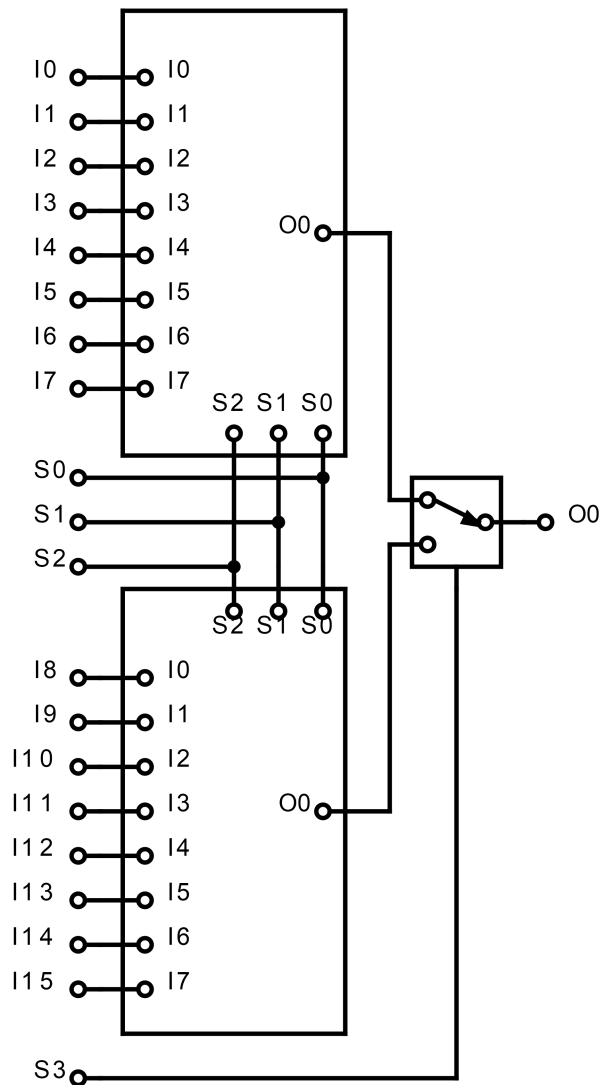


3. Construct a 16-to-1 multiplexer with 8-1 and 2-1 multiplexers. Use block diagrams.



<sup>0</sup>The software used to draw circuits has an issue with exporting label text. I apologize for any inconvenience.

6. Implement a full-adder with two 4-1 multiplexers.

$A$	$B$	Carry In	Sum	Carry Out	$I\#$	Connection (Sum)	Connection (Carry)
0	0	0	0	0	0	Carry In	0
0	0	1	1	0			
0	1	0	1	0	1	$\overline{\text{Carry In}}$	Carry In
0	1	1	0	1			
1	0	0	1	0	2	$\overline{\text{Carry In}}$	Carry In
1	0	1	0	1			
1	1	0	0	1	3	Carry In	1
1	1	1	1	1			

