

Demultiplexers

Part A Implement a 1-to-2 demultiplexer (described in the truth table below) using basic gates. Be sure to label the inputs, IN , C , Out_A , and Out_B .

IN	C	Out_A	Out_B
0	0	0	0
1	0	1	0
0	1	0	0
1	1	0	1

Part B Now design a 1-to-4 demultiplexer, define in the truth table below, using 1-to-2 demultiplexers. Be sure to label the inputs, IN , C_0 , C_1 , Out_A , Out_B , Out_C , and Out_D . Use this icon for your one to two demultiplexer.

IN	C_1	C_0	Out_A	Out_B	Out_C	Out_D
0	0	0	0	0	0	0
1	0	0	1	0	0	0
0	0	1	0	0	0	0
1	0	1	0	1	0	0
0	1	0	0	0	0	0
1	1	0	0	0	1	0
0	1	1	0	0	0	0
1	1	1	0	0	0	1

