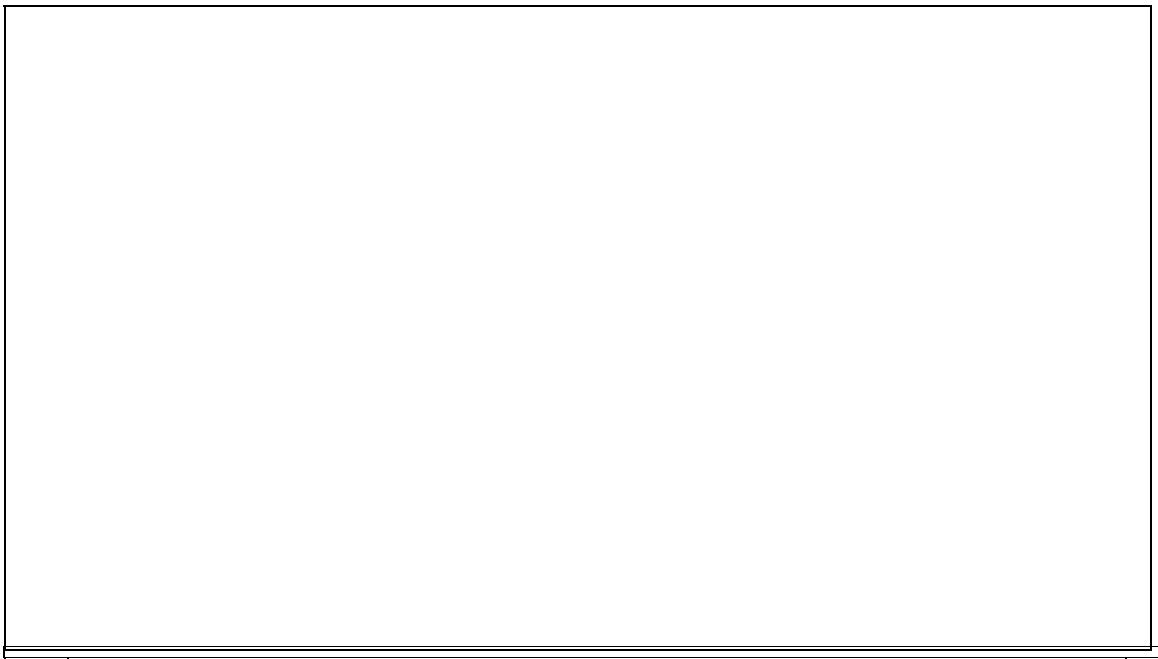
At 2:15, Professor Albonesi says that he has four OR gates. He meant to say:

"I have a four input OR gate..."

FULL ADDER



4:51 / 4:51 1.0x

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1. CHECK YOUR UNDERSTANDING (1/1 point)

Which of the following is true about a Full Adder circuit? [Check all that apply]

- [ ] S and C_{out} are never both 0.
- [ ] S and C_{out} are never both 1.
- [x] Whenever exactly one of A, B, and C_{in} are 1, S = 1 and C_{out} = 0. ✔
- [x] Whenever exactly two of A, B, and C_{in} are 1, S = 0 and C_{out} = 1. ✔

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EXPLANATION

A	B	C_{in}	S	C_{out}
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

The first two statements are false. In the first row, $S = C_{out} = 0$. In the last, $S = C_{out} = 1$. The last two statements are seen to be true by inspection of the truth table.

Hide Answer *You have used 2 of 2 submissions*

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