

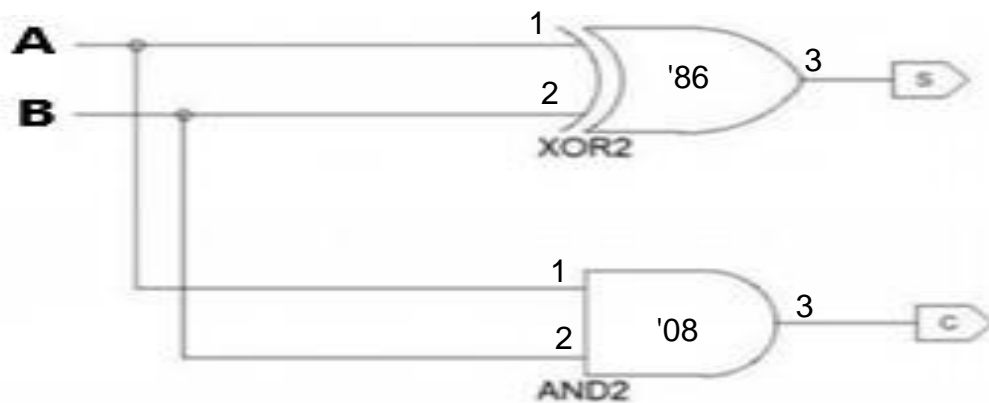
CS223

LAB1

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Half adder Schematic:



IC List:

- 1- One 74LS86 quad 2-input XOR gate
- 2- One 74LS08 quad 2-input AND gate

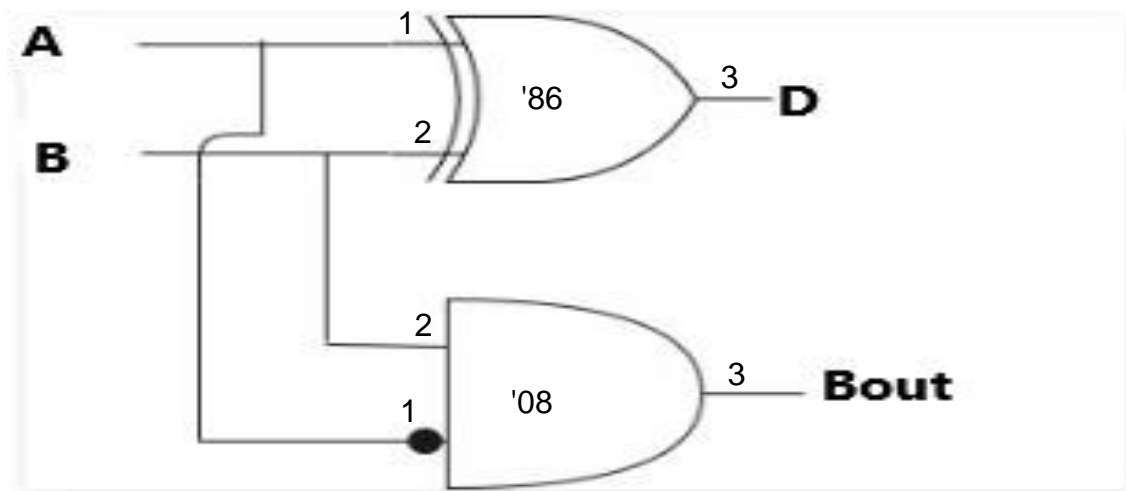
*74LS86

GND - 7
+5V - 14

*74LS08

GND - 7
+5V - 14

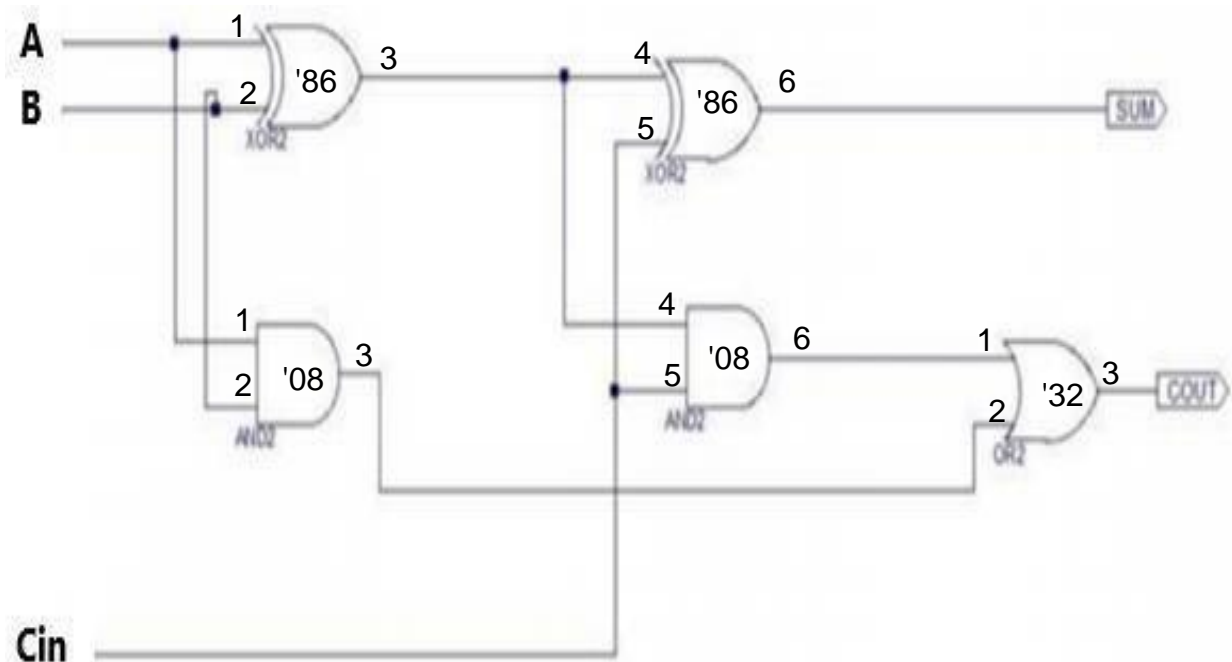
Half subtractor Schematic:



IC List:
 1- One 74LS86 quad 2-input XOR gate
 2- One 74LS08 quad 2-input AND gate

<u>*74LS86</u>	<u>*74LS08</u>
GND - 7	GND - 7
+5V - 14	+5V - 14

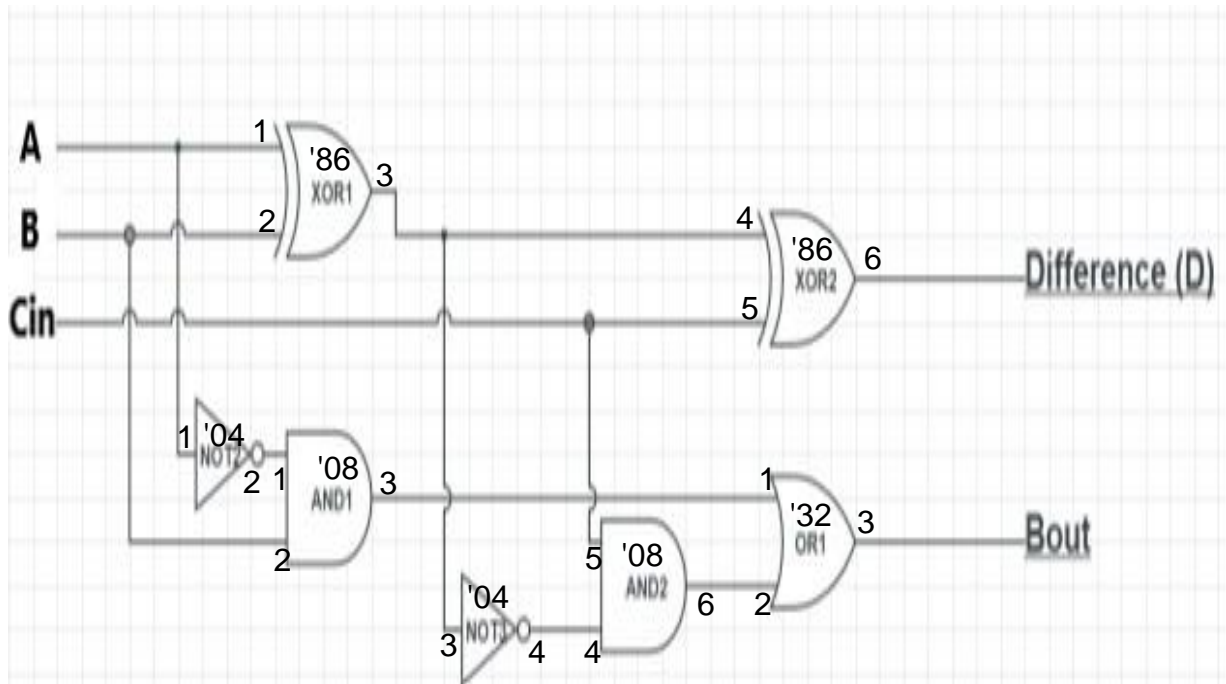
Full adder Schematic:



IC List:
 1- Two 74LS86 quad 2-input XOR gate
 2- Two 74LS08 quad 2-input AND gate
 3- One 74LS32 quad 2-input OR gate

<u>*74LS86</u>	<u>*74LS08</u>	<u>*74LS32</u>
GND - 7	GND - 7	GND - 7
+5V - 14	+5V - 14	+5V - 14

Full Subtractor Schematic:



IC List:

- 1- Two 74LS86 quad 2-input XOR gate
- 2- Two 74LS04 quad 2-input AND gate
- 3- One 74LS32 quad 2-input OR gate
- 4- Two 74LS04 HEXInverting gate

*74LS86

GND - 7
+5V - 14

*74LS04

GND - 7
+5V - 14

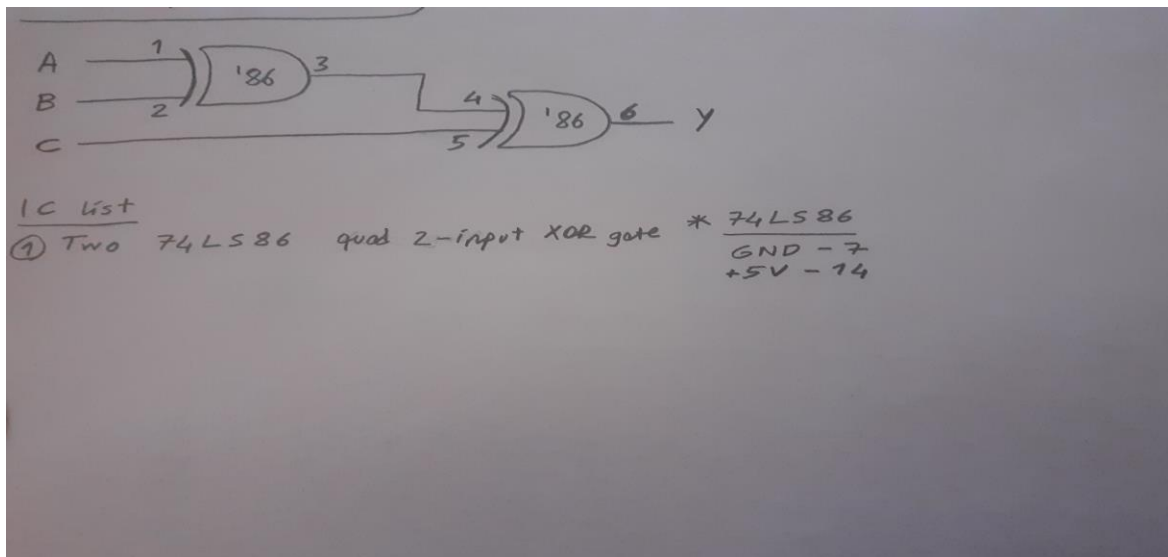
*74LS08

GND - 7
+5V - 14

*74LS32

GND - 7
+5V - 14

3 Input XOR Schematic:



Lab calculator schematic:

