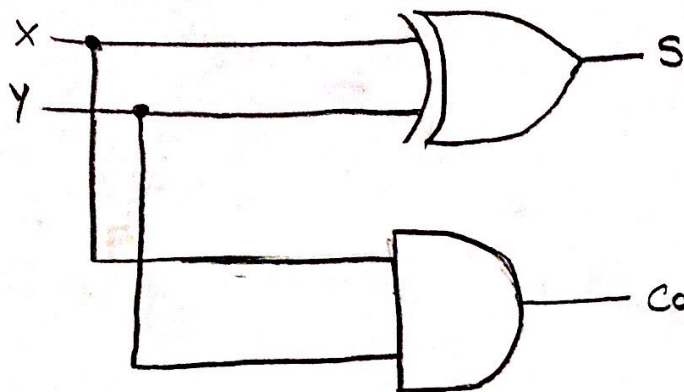
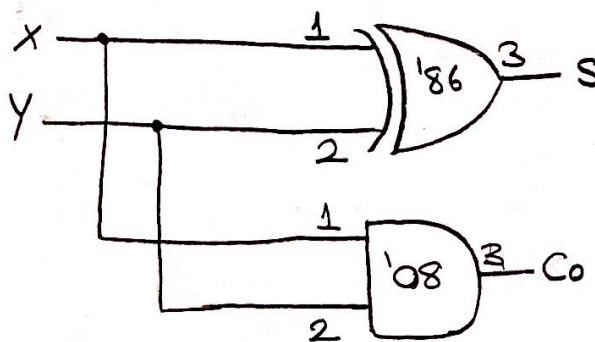


① Half Adder:

$$S = \bar{A} \cdot B + A \cdot \bar{B}, Co = A \cdot B$$

* Logic Diagram:* Circuit Schematic:* Pin Numbers for GND and +V

* 7486
GND-7
+5V-14

* 7408
GND-7
+5V-14

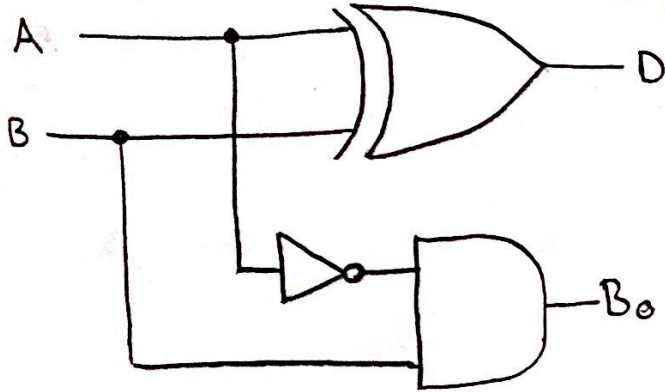
* IC List:

- ① One 7486 Quad 2-input XOR Gate
- ② One 7408 Quad 2-input AND Gate

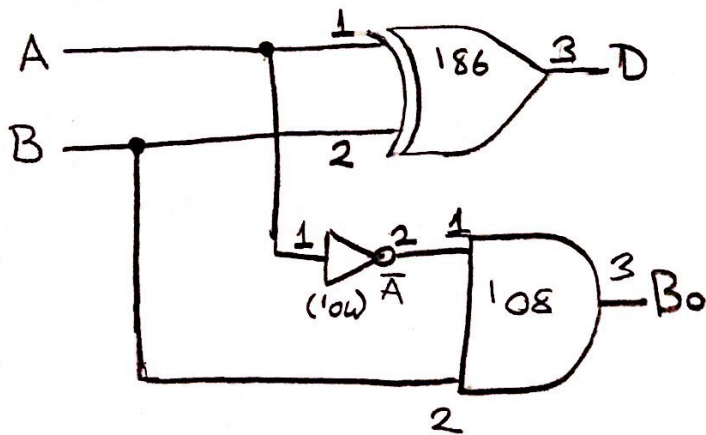
② Half Subtractor:

$$D = \bar{A} \cdot B + A \cdot \bar{B}, \quad B_o = \bar{A} \cdot B$$

* Logic Diagram:



* Circuit Schematic:



* Pin Numbers for GND and +V

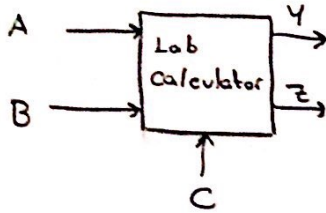
* 7404	* 7486	* 7408
GND-7	GND-7	GND-7
+5V-14	+5V-14	+5V-14

* IC List

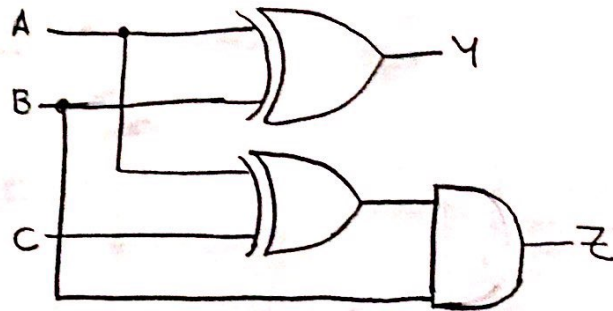
- ① One 7404 Hex Inverter Gate
- ② One 7408 Quad 2-input AND Gate
- ③ One 7486 Quad 2-input XOR Gate

③ Lab calculator

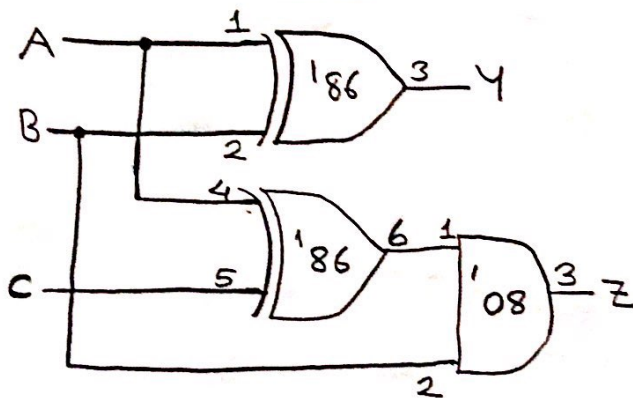
$$Y = \bar{A} \cdot B + A \cdot \bar{B}, Z = (\bar{A} \cdot B + A \cdot \bar{B}) \cdot B$$



* Logic Diagram:



* Circuit Schematic:



* Pin Numbers for GND and +V

* 7486
 GND-7
 +5V-14

* 7408
 GND-7
 +5V-14

* IC List:

- ① One 7408 Quad 2-input AND gate
- ② One 7486 Quad 2-input XOR Gate