**Experiment 1 – Building a Basic Circuit**

**CSCI 220 – Section \_\_**

**Due 2/5/2016**

Report By:

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On my honor I have neither received nor given aid on this report.

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part I  
Objective of the Experiment**

The objective of this experiment is to build a basic circuit on a breadboard.

**Part II  
Equipment/components necessary for the Experiment**

1 7404 NOT chip

1 7408 2-input AND chip

1 7432 2-input OR chip

1 bread board

**Part III  
Description of the followed procedure**

**(Truth table, Circuit design, etc.)**

The circuit consisted of two NOT gates, two OR gates, and two AND gates. It will have three inputs: a, b, and c, with one output: y. The function is *y(a, b, c) = a'(c + b') + b'c*.

Truth Table:

**a b c | y(a, b, c)**

**===============**

0 0 0 **|** 1

0 0 1 **|** 1

0 1 0 **|** 0

0 1 1 **|** 1

1 0 0 **|** 0

1 0 1 **|** 1

1 1 0 **|** 0

1 1 1 **|** 0

Gate Diagram:



**Part IV  
Conclusion**

In conclusion: the circuit we built worked fine. It was tested against the truth table and all cases had the correct output.