

# Ripple Carry Adder (1A)

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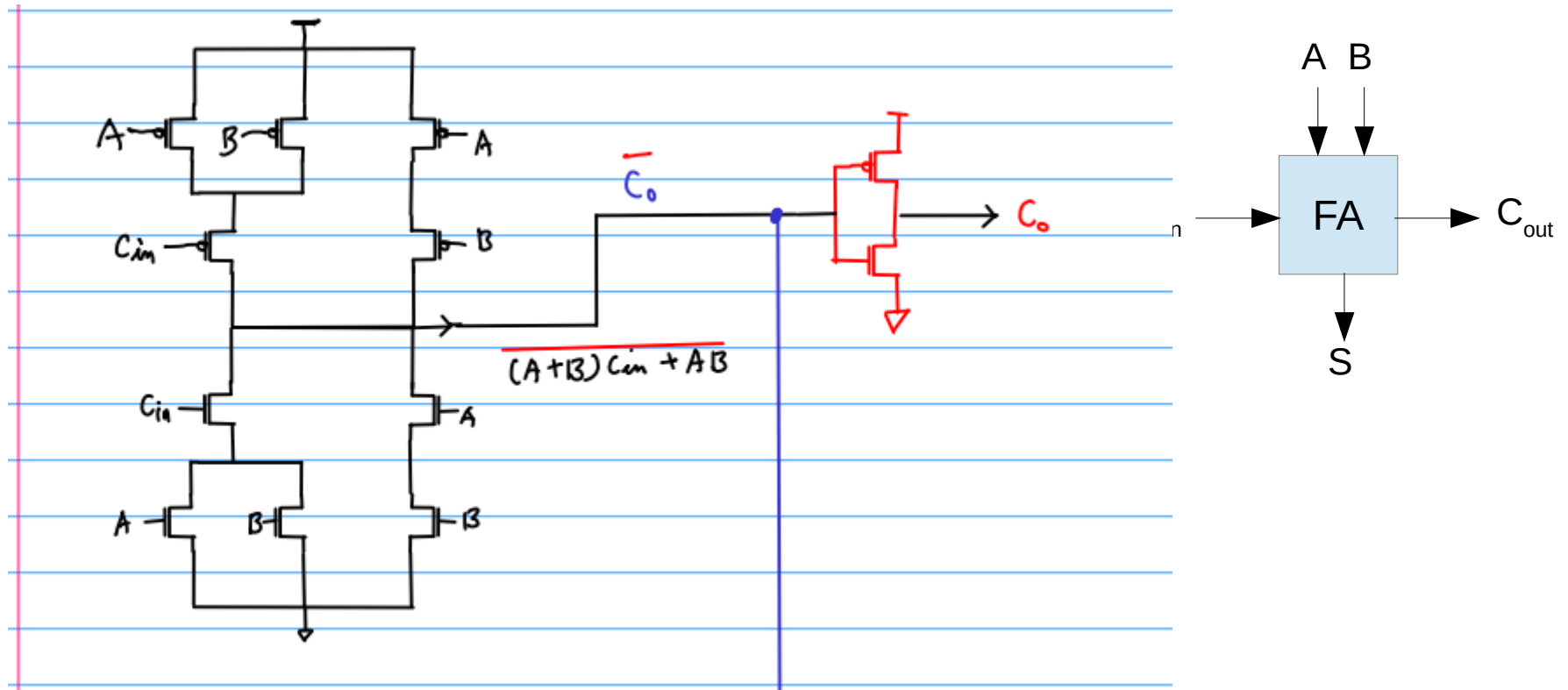
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Please send corrections (or suggestions) to [youngwlim@hotmail.com](mailto:youngwlim@hotmail.com).

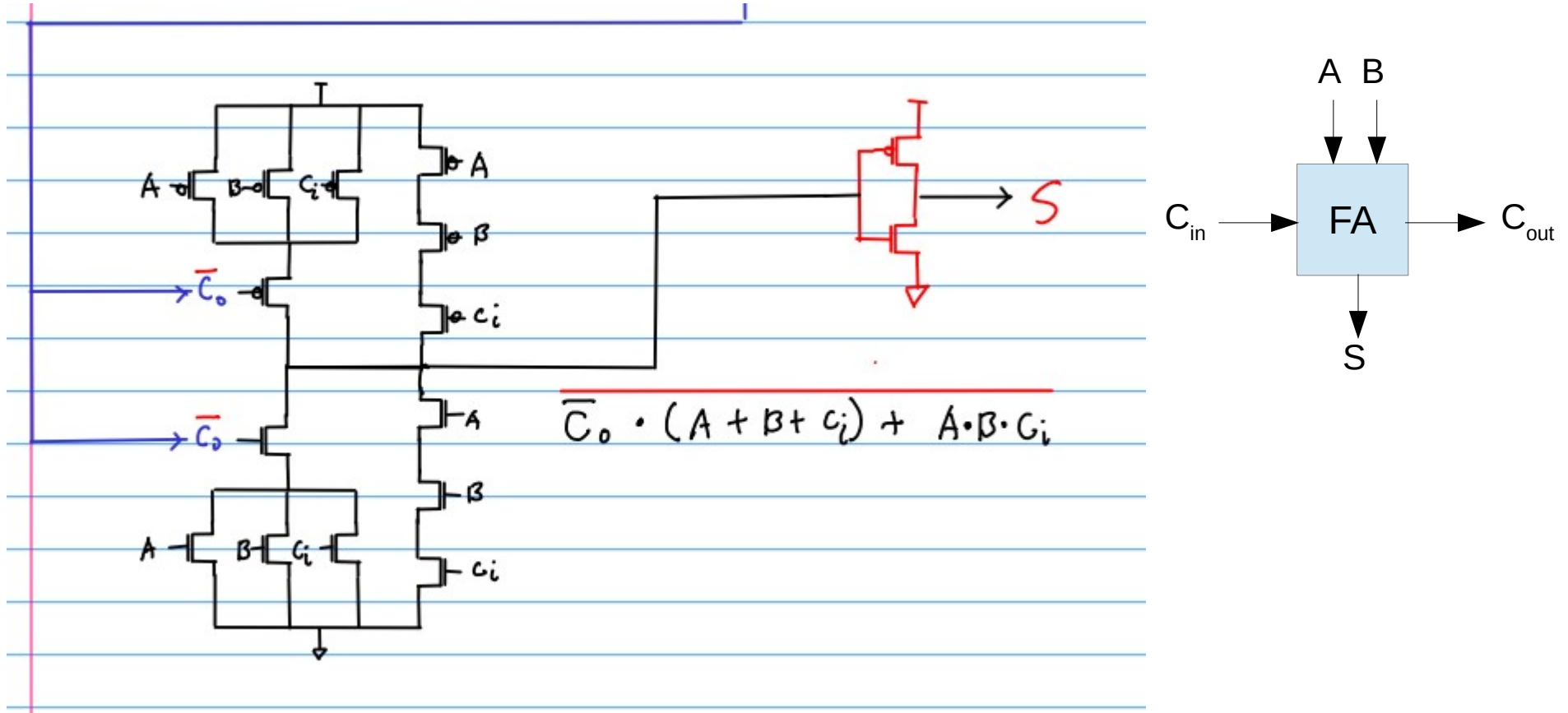
This document was produced by using OpenOffice and Octave.

# CMOS Level Full Adder



<https://upload.wikimedia.org/wikiversity/en/1/18/RCA.Note.H.1.20151215.pdf>

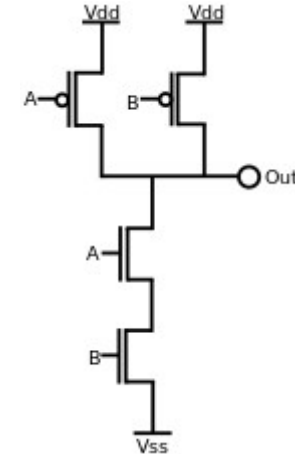
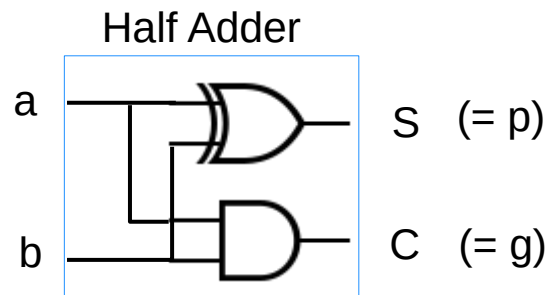
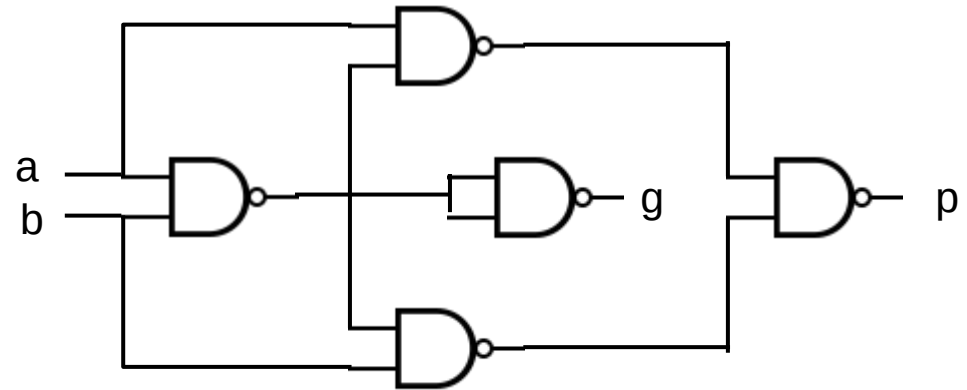
# CMOS Level Full Adder



<https://upload.wikimedia.org/wikiversity/en/1/18/RCA.Note.H.1.20151215.pdf>

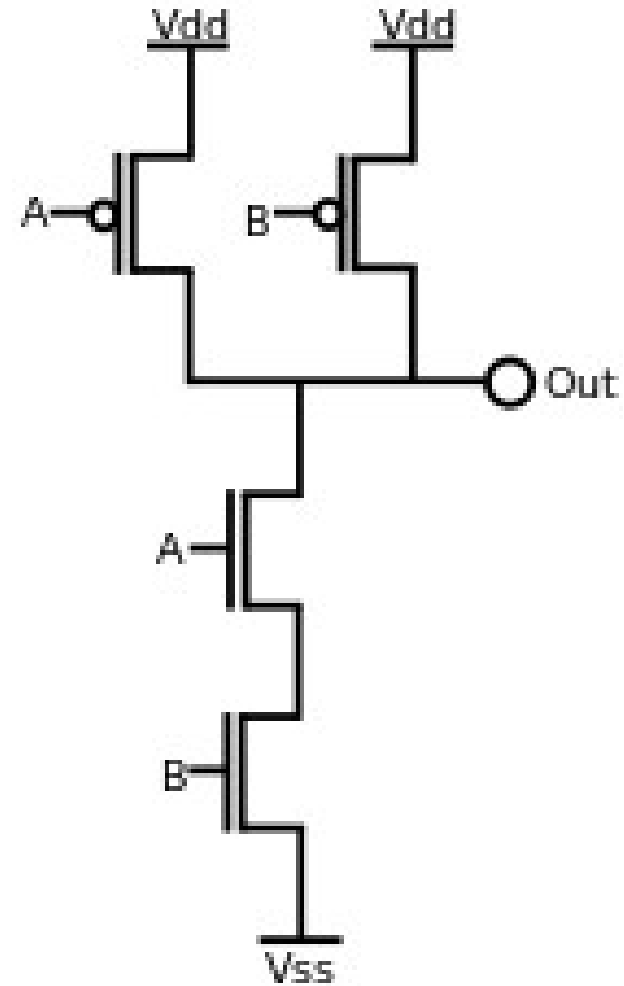
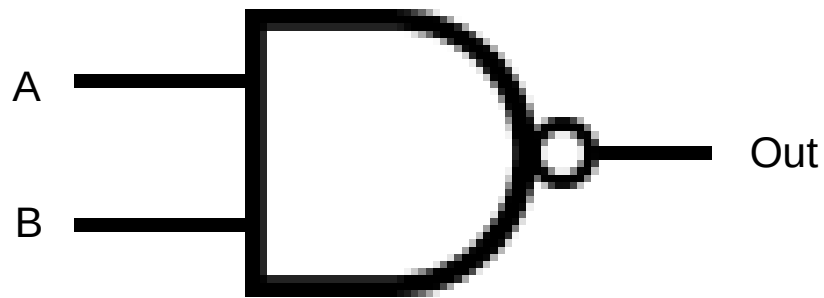
# Half Adder Implementation

Half Adder  
 $S = a \oplus b$   
 $C = a \wedge b$



[https://people.eecs.berkeley.edu/~newton/Classes/CS150sp98/lectures/week6\\_2/sld007.htm](https://people.eecs.berkeley.edu/~newton/Classes/CS150sp98/lectures/week6_2/sld007.htm)

# CMOS NAND Gate



[https://people.eecs.berkeley.edu/~newton/Classes/CS150sp98/lectures/week6\\_2/sld007.htm](https://people.eecs.berkeley.edu/~newton/Classes/CS150sp98/lectures/week6_2/sld007.htm)



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## References

- [1] en.wikipedia.org
- [2] D.M. Harris, S. L. Harris, "Digital Design and Computer Architecture"
- [3] <http://www.aoki.ecei.tohoku.ac.jp/arith/mg/algorithm.html>