


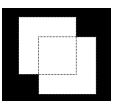
*Existing logic gates*

OR 



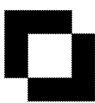
Only if both inputs are 0 is the output 0.

NOR 




Only if both inputs are 0 is the output 1.

XOR 



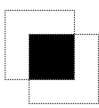
Only if one of the inputs (but not both) is 1, the output is 1. Otherwise, the output is 0.

NOT 



If the input is 1, the output is 0. If the input is 0, the output is 1.

AND 



Only if both inputs are 1 is the output 1. Otherwise, the output is 0.

NAND 




Only if both inputs are 1 is the output 0. Otherwise, the output is 1.

XNOR 



Only if both inputs are the same (two 0s or two 1s) is the output 1.

*Proposed additional logic gate*

BUT 

Stops the functioning of the circuit and raises a concern.