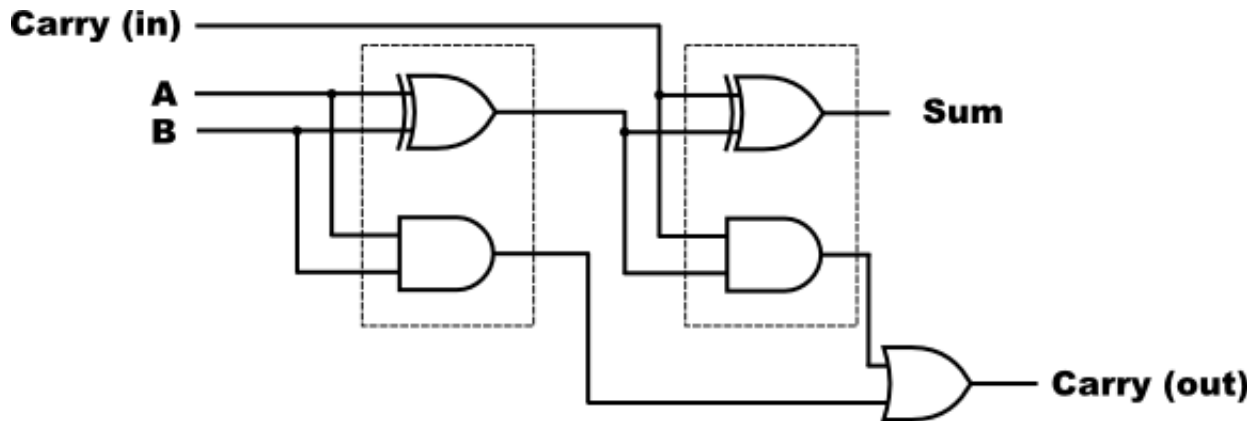


# Full Adders & Ripple Carry

We can combine 2 half adders to build a **full adder**. The 2 carries can be joined with an OR gate.



These full adders can be combined together by connecting the carry-out from one adder to the carry-in of the next one. This allows us to add binary numbers of any size.

This is known as a **ripple carry adder** since the carries 'ripple' through the adder as it calculates the result.

