A full adder is used to add two bits (x and y) along with an input carry (z) and produces Sum and Carry (output) bits. A full adder is created using two half adders and an XOR gate. x and y are input into the first half adder. z is input to the second half adder. The Sum bit of the first half adder is input into the second half adder. The Carry bit of the first half adder is input into the XOR gate. The Sum bit of the second half adder is the final Sum, and the output of the XOR gate is the final Carry.