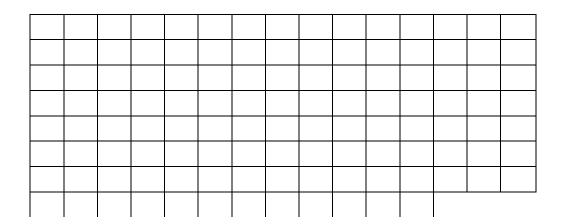# Digital Logic: From Gates to Functions and Memory

Professor Bob Brown – Kennesaw State University
Bob.Brown@Kennesaw.edu

Exercise: Build a 5-bit Adder

The diagram shows a 4-bit adder. Extend the design to build a **5-bit adder.** Space your adder chips about one gate-width apart so that you have room to work.

Test these values and a few others. With eight inputs, there are $2^8 = 256$ possible input combinations. Testing them all in class is not a good use of time.