

Guided Reading in CODE

The reading in **Code** builds up to how we can use binary and transistors to build a computer. Essentially the history of representing information using alternative methods such as Morse code and Braille, were technology breakthroughs. Automating alternative information representations with electricity continued this progress.

Keep reading...

Chapter 11

1. Briefly describe the four gates explained in Chapter 11. Describe the behavior of each gate based on the input values to the gate.
 - AND gate – A basic AND gate requires at least two switches. Both switches must let voltage through to produce an output.
 - OR gate – A basic OR also requires at least two switches. One or more switches have to let electricity through to produce an output.
 - NAND & NOR gates – These gates work the same way as the AND/OR, but are inverted compared to their counterparts

Chapter 12

2. A half adder is built from how many "sub components" and has how many inputs and outputs?
There is a AND gate and an XOR gate involved with the half adder. Also, it takes two inputs and has two outputs.
3. A full adder is built from how many "sub components" and has how many inputs and outputs?
The components for the full adder are two half adders and an OR gate. It has three inputs and one output.
4. How many total inputs and outputs are there for an 8-bit adding circuit?
24 inputs and 16 outputs
5. How many total transistors are needed for the ripple version of the 8-bit adder?
144

Chapter 13