Questions

1) What are the three basic logic/digital circuit gates? Identify them and draw the logic gate symbol for each. (1 point each)
   a. 
   b. 
   c. 

2) Why are computer circuits (digital circuits) also referred to as logic circuits (a short phrase answer is fine) (1 point)

3) Draw the logic circuit diagram for the following Boolean expression (1 point)
   \[(A \lor B) \land \lnot C\]

4) Add these two binary numbers (1 point)
   \[
   \begin{array}{c}
   1 \ 0 \ 1 \\
   0 \ 1 \ 1 \\
   \hline
   0 \ 1 \ 1 \\
   \end{array}
   \]
5) Comparing the half adder circuit and full adder circuits
   a. The half adder circuit can add how many bits of data?
      i. How many inputs does it have?
      ii. How many outputs does it have?
   b. The full adder circuit can add how many bits of data?
      i. How many inputs does it have?
      ii. How many outputs does it have?

6) What is feedback and why is it important in memory circuits? (2 points)

7) What is a register? What are two of the registers in the CPU? (1 point)