CSCI 2321 (Principles of Computer Design), Spring 2004

Quiz 3 Solution

1. (2 points) Convert 17_{10} to hexadecimal (base 16).

   Solution: 11_{16}

2. (2 points) What is the hexadecimal representation of -17_{10}, assuming 32-bit two's complement notation?

   Solution: FFFFFFEF_{16}

3. (6 points) Draw a combinational-logic circuit (combination of AND and OR gates and inverters) that for inputs a and b produces output c that is 0 when $a = b$ and 1 when $a \neq b$. (Hint: If you don't see how to do this, make a table showing values of c for all possible combinations of a and b and see if that helps.)

   Solution: