Quiz 1

Mon Sep 18

You have up to 20 minutes. You may use a standard calculator, but no text book or notes.

1. Suppose we have the digits **135**, written using base **six.** What quantity does that represent, expressed in base **ten?** (4 points)

2. Convert the base ten number **178** into base **twelve.** Recall that in base twelve we use the twelve symbols 0,1,2,3,4,5,6,7,8,9,X,E.

3. Convert the following **unsigned** binary numbers into base ten. (6 points)

   a. `11100` _____
   b. `  111` _____
   c. `11010` _____
   d. `11001` _____

4. Convert the following base ten numbers into binary. (6 points)

   a. `12` _____
   b. `17` _____
   c. `31` _____
   d. `40` _____

5. Convert the following signed numbers into binary using **6-bit signed two's complement.** (Every answer should include all six bits.)

   a. `-1` _____
   b. `-17` _____
   c. `27` _____
   d. `-32` _____