

Quiz 1

Wed Jan 31

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

1. Suppose we have the digits **215**, written using base **six**. What quantity does that represent, expressed in base **ten**?
2. Convert the base ten number **167** 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.
 - a. 11100 _____
 - b. 111 _____
 - c. 11010 _____
 - d. 11001 _____
4. Convert the following base ten numbers into binary.
 - 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 _____