Quiz 1

Mon Sep 21

You have up to 25 minutes. You may use a standard calculator, but no text book or notes.

1. Suppose we have the digits **124**, written using base **six.** What quantity does that represent, expressed in base **ten?** (2 points)

2. Convert the following **unsigned** binary numbers into base ten. (4 points)

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

3. Convert the following base ten numbers into binary using **5-bit signed two's complement** (4 points)

   a. −12 _____
   b. −8 _____
   c. 12 _____
   d. −1 _____

4. Add and verify the following **unsigned** (**not** fixed-size) binary numbers. (4 points)

```
    1 1 0 0              1 1 1 1 1
+ 1 0 0 1 1 0        + 1 0 0 1 0 0
```

5. Convert the hexadecimal number `2C4` to binary. (3 points)

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6. Convert the octal number `617` to binary. (3 points)

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