Quiz 1

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Solutions

1. Convert the following numbers from the specified bases *into* base ten.
   - 256_{7} = 139 $_{10}$
   - 256_{8} = 174 $_{10}$
2. Convert the base ten number 319 into base nine.
   - 319_{10} = 384 $_{9}$
3. Convert the following base ten (decimal) numbers into binary, using as many bits as needed.
   - 17 = 10001
   - 40 = 101000
   - 31 = 11111
4. Convert the following **unsigned** binary numbers into base ten.
   - 1100 = 12
   - 111 = 7
   - 11011 = 27
5. Convert the following 4-bit **signed two's complement** binary numbers into base ten. **Note:** "signed" means that answers **might be negative.**
   - 0101 = +5
   - 1011 = -5
   - 1001 = -7
   - 1111 = -1
6. Add the following **4-bit fixed-size** binary numbers. **Also** convert each number to base ten. **Note:** "fixed-size" means that your answers **must fit in 4 bits.**

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1 1 1
  1 0 1 1  = 11
+ 1 1 1 0  = 14
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  1 0 0 1  =  9
```