

Bring this homework to class on Thursday Oct.4.

#1. Write the following numbers as binary fractions with 4 fractional bits (0.0001 precision)

a. 16.1 \_\_\_\_\_

b. 0.1875 \_\_\_\_\_

#2. Write the missing integer numbers in binary, hex, and decimal representations.

Decimal	Hex	Binary
314		
	7A	
		10110101
243		
	C3	
		01011111

#3. Express or decode the following binary floating point numbers. The fraction part (mantissa) should be normalized to five-bit accuracy (to 0.1xxxx where only the four bits xxxx are stored in memory, but show all here). The exponent should be a 5-bit number in 2's-compliment representation.

Decimal Number	Sign Bit	Mantissa (fraction)	Exponent
2.125	0	0.10001	00010
88			
	1	0.11101	11101
-0.05698			

#4. Show how you would do the following calculations using 2's complement 10-bit binary numbers when  $A = 181$  and  $B=202$ . Show the operations in binary, and the results in binary and decimal

	Binary	Decimal
A	_____	181
B	_____	202
-A	_____	-181
-B	_____	-202
A - B	_____	_____
B - A	_____	_____
(-A) + (-B)	_____	_____