Convert the following into decimal:

(1010010)2 64+16+2 82 base 10

(1AE)16 1 x 16^2 10 x16 14 x 16^0 = 256+160+14= 430 base 10

(231)8 2\*8^2 3\*8 1\*8^0 = 153 base 10

(01110011.1000)bcd 73.8 base 10

(021012)3 194

Convert the following into binary:

(2FB)16 0010 1111 1011

(54)8 101100

(127)10 111111 base 2. divide by 2 keep track of remainder

Convert (-20)10 into the following formats:

signed magnitude: 110100

one’s complement: 101011

two’s complement: 101100

excess 50: 11110

Convert (233.625)10 into a binary: separate and divide by 2 on left

multiple by 2 on right of decimal

11101001.101 base 2

solve the following two’s complement problems. Indicate errors due to overflow where applicable:

01001 +

00011 = 01100

01001 +

01010= 10011 OF- first bit is signed bit, shouldn’t be neg in addition

10011 +

11010= 101101 OF

11011 +

11100= 10111 extra bit gets discarded

01100 –

00111 flip number add 1, 11001 = 00101

11110 –

~~00011~~ +11101 = 111011

10101 \* 00101 sign extension wtf???

convert (-12.25)10 into single precision binary floating point format

-1.10001 \* 2^3

convert (-12.25)10 into double precision binary floating point format