Show all your work to get full credits. You can leave your answer in powers of 2.

No calculators allowed.

1. (2 points) What is the range of an 16-bit 2’s complement number.

2. Convert 110101002 to decimal assuming
   (a). (2 points) it is an 8-bit 2’s complement integer.
   (b). (2 points) it is an 8-bit unsigned integer.
   (c). (4 points) it is an 8-bit floating point number representation that uses 1 bit for the sign, 4 bits for the biased exponent and 3 bits for the fraction (f). Other than the numbers of bits, the representation is similar to the IEEE 754 standard.