1. Zeqi Li 09/28/2020 HW 1

2. 00110111

3. 11110001

4. 10011110

5. 1111111111111110

6. 511

7. 4095

8. int

9. I’ll use float. Float having enough value range. As for there’s no floating point data type can show the precise mass of proton, any type of floating point data type that have enough value range would be enough.

10. List the parts of Cs floating point representation

type size value range precision

float 4 bytes 1.2E-38 to 3.4E+38 6 decimal places

double 8 bytes 2.3E-308 to 1.7E+308 15 decimal places

11.

float is 1 bit for the sign and 8 bits for the exponent and 23 bits for the mantissa.

double is 1 bit for the sign and 11 bits for the exponent and 52 bits for the mantissa.

The first bit is for sign, which shows the is negative or positive. If the number is negative then the number of sign will be 1 ,if positive the number of sign will be 0.