

Lab02_XIAQIN_QIU

1.
 - a) 9 bits. $9\text{bits}=2^9-1=511>400$
 - b) $511-400=111$ students
2. $680_{10}=1010101000_2=1250_8=2A8_{16}$
3. 1311365115 in Decimal
4.
 - a) 255
 - b) -1
 - c) -0
5.
 - a) 0100101111010010
 - b) 1011010000101110
 - c) B42E
6.
 - a) 6133
 - b) a3
7.
 - a) (01111101)(101000000000000000000000) sign: negative $127+(-2)=125$ exp=-2
 - b) $-(1.1010*2^2)=-13/32$
8. $1.01101011*2^2$
9.
 - a) 01000000101101011000000000000000
 - b) 40B58000
10.
 - a) 24-bit needed, only 23-bit is offered for IEEE floating-point.
 - b) 11.000000000000000000000001
 - c) 11.0000000000000000000000010
11.
 - a) No
 - b) No
12. 1
 - a) Yes. The result is 1.00001 for the addition of .00001 and 1.00001
 - b) Yes. The truncation occurred in a), so it still occurs.