

Signature _____

Name _____

Student ID _____

cs30x _____

Score: _____

Quiz 1
CSE 30
Fall 2007

#1. Show the representation of -305_{10} in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one's-complement

c) two's complement

#2. Convert 284_{10} into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

#3. Fill in the Condition Code bits for the following addition instructions (8-bit two's-complement numbers):

```
  01101010
+ 00010101
-----
```

```
  11001011
+ 00110101
-----
```

N	Z	V	C

N	Z	V	C

(over)

#4. Powers of 2

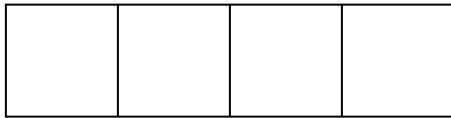
$$256K = 2^{\text{---}}$$

$$2^{36} = \text{---} \quad (\text{in terms of K, M, G, etc.})$$

#5. In a Big-Endian architecture, show how the bytes are laid out in memory for the following statement (write the hexadecimal values of the bytes in the appropriate memory locations):

```
long john = 0x18765309;
```

0 1 2 3



What is the hex value of the least significant byte? _____