

Signature _____

Name _____

Student ID _____

cs30x _____

Score: _____

Quiz 1
CSE 30
Spring 2008

#1. Show the representation of -354_{10} in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one's-complement

c) two's complement

#2. Convert 381_{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):

```
  10110110
+ 11001001
-----
```

```
  10101011
+ 01010101
-----
```

N Z V C

```
-----
|   |   |   |   |
-----
```

N Z V C

```
-----
|   |   |   |   |
-----
```

(over)

#4. Powers of 2

$$128K = 2^{\text{---}}$$

$$2^{14} = \text{_____} \quad (\text{in terms of K, M, G, etc.})$$

#5. List the order of the stages of the compilation process discussed in class:

A - ccomp (C Compiler)

B - ld (Linkage Editor)

C - as (Assembler)

D - cpp (C Preprocessor)

E - exe/a.out (Executable image)

% cc/gcc file.c --> _____ --> _____ --> _____ --> _____ --> _____