

Signature \_\_\_\_\_

Name \_\_\_\_\_

Student ID \_\_\_\_\_

cs30x \_\_\_\_\_

Score: \_\_\_\_\_

**Quiz 1  
CSE 30  
Winter 2005**

#1. Show the representation of  $-240_{10}$  in the following representation schemes (assume 16-bit words):

a) sign magnitude

b) one's-complement

c) two's complement

#2. Convert  $321_{10}$  into (assume 16-bit words):

a) binary

b) octal

c) hexadecimal

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

11110110  
+ 00001010  
-----

10101010  
+ 10011001  
-----

**N    Z    V    C**  
-----  
|   |   |   |   |  
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**N    Z    V    C**  
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|   |   |   |   |  
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(over)

**#4. Powers of 2**

$$16G = 2^{\text{---}}$$

$$2^{27} = \text{_____} \quad (\text{in terms of K, M, G, etc.})$$

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

A - ld (Linkage Editor)

B - exe/a.out (executable image)

C - ccomp (C Compiler)

D - as (assembler)

E - cpp (C Preprocess)

% cc/gcc file.c --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_ --> \_\_\_\_\_