**Take-Home Quiz 9 (15 pts) – Bits, Bytes, and C Bitwise Operators**

**NOTE: Please submit your hard copy solution in lab this week**

1. (2 pts) How many bits are in one byte? \_\_\_\_\_\_\_\_\_8\_\_\_\_\_\_\_\_
2. (2 pts) How many bytes are in 32-bits? \_\_\_\_\_\_\_\_\_4\_\_\_\_\_\_\_\_
3. (2 pts) What is the largest unsigned number that may be represented by eight bytes? \_\_\_\_2^64 - 1 = \_\_\_\_\_\_\_\_\_\_\_\_\_
4. (3 pts) What is the result of the following C expression? List your answer in *decimal* form.

87 << 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

assuming enough storage...

87 == 1010111

87 << 2 == 101011100 (bin) == 348

1. (3 pts) What is the result of the following C expression? List your answer in 8-bit *binary* form.

47 >> 3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

47(dec) == 00101111(bin)

47 >> 3 == 00000101

1. (3 pts) What is the result of the following C expression? List your answer in 4-bit *binary* form.

10 & (~9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9 == 1001

~9 == 0110

10 == 1100

0100 == 10 & (~9)