Pop Quiz #2. CSE 141 Spring 2004

Binary Representations

NAME: (2 points)

Student ID number: (2 points)

No calculators are allowed. There is a cheat-sheet giving powers-of-two on the back of the test if you need it. Also, a MIPS instruction format cheat-sheet is attached.

This is a closed book, closed notes, closed neighbor test. If you crack a book, touch a calculator, consult any written material (other than the test) or consult your neighbor's test, you will be blocked from withdrawing from the class and you will receive an F. Your name will be forwarded to the Dean for academic review and possible further sanctions.

This is a "silent" test. No questions allowed once the test starts. If a question is unclear, make a reasonable assumption and state that assumption clearly in writing. If your assumption is reasonable and clearly stated you may still receive full credit.

Some questions may be *intentionally* incomplete in order to test your ability to make reasonable assumptions.

Do not start the test until the signal is given.

Consider the following 32-bit binary number

00000000110000110000100000100000

What is its value as a signed binary integer assuming the most significant bit corresponds to the sign bit? (10 points)

What does it correspond to as a MIPS instruction? You will probably wish to consult the MIPS cheat-sheet showing instruction formats on the back (10 points).

What number does it represent interpreted as an IEEE 754 Floating Point number? (10 points)