YOU MUST SHOW ALL WORK TO GET ANY CREDIT! CALCULATORS ARE NOT PERMITTED.

1. Convert 0x0AFE (hex) to the following (assume all values are in 16 bits):
   
   Decimal: ____________________________________ Octal: ____________________________________
   
   2's Complement (in binary): ____________________________
   
   Signed Magnitude (in binary): ____________________________

2. Add the following 8-bit 2's complement numbers

   01010110 11111001 11011101 00100110
   11101011 11010110 10100001 01011010
   -------- -------- -------- --------

3. Convert the following as indicated:
   
   3.025 (base 10) into base 2: ____________________________
   
   001101101.110 (base 2) into base 10 (decimal): __________

4. Give a MIPS R2000 instruction which allows you to move the contents of one register to another (no pseudo-instructions).

5. Describe the purpose of the frame pointer.

6. What is different between the j, jr, and jal instructions? Why are all three needed?

7. Write a function in MIPS assembler that returns the largest BYTE in a null terminated string. An empty string returns a zero.