CS51 – Homework #6

Convert the given MIPS instruction it to its binary and hex representations by doing the following:

- On first line, type registers with dollar signs and constants in decimal
- On second line, type register numbers and constants in decimal
- On third line, convert all entries from decimal to binary
- On fourth line, convert binary to hex.

1. `sw $t2, 20($s4)`

op	rs	rt	const/addr
sw	$s4	$t2	20
43	20	10	20
101011	10100	01010	0000 0000 0001 0100
Hex:	AD8AA0014		

2. Assume we have the following:

t0	0000 0000 0000 0000 0000 0000 0011 1011	= 59
t1	0000 0000 0000 0000 0000 0000 1011 1011	= 187

Find the value of $t2 and $t3 in binary and decimal after each of the following instructions are executed:

`sll $t2, $t0, 4`

t2	0000 0000 0000 0000 0000 0011 1011 0000	944

`srl $t3, $t1, 5`

t3	0000 0000 0000 0000 0000 0000 0000 0101	5

3. Given the following, find the binary results of the MIPS instructions:

t0	0000 0000 1100 0110 1010 1110 0011 1110
t1	0000 0000 0110 1111 0111 1101 1000 0001

`and $t2, $t0, $t1`

t2	0000 0000 0100 0110 0010 1100 0000 0000

`or $t3, $t0, $t1`

t3	0000 0000 1110 1111 1111 1111 1011 1111

`nor $t4, $t0, $zero`

t4	1111 1111 0001 0000 0000 0000 0100 0000