CMPEN331 – Quiz 3

Section: **Major:**

Name: **Email:**

1. **(3 points)**

addi $t0, $s6, 4	I-type	22	8		4
add $t1, $s6, $0	R-type	22	0	9	
sw $t1, 0($t0)	I-type	8	9		0
lw $t0, 0($t0)	I-type	8	8		0
add $s0, $t1, $t0	R-type	9	8	16	

2. **(2 points)**
   The instruction memory is accessed four times (as there are four instructions) and the data memory is accessed twice (once for the lw instruction and another time for the sw instruction).

3. **(5 points)**
   sll t0, s3, 2   # $t0 = 4*i
   add t0, S6, t0 # $t0 = Base address of A + 4*i
   sll t1, s4, 2   # $t1 = 4*j
   add t1, s6, t1 # $t1 = Base address of A + 4*j
   lw t0, 0(t0) # t0 = the value of A[i]
   lw t1, 0(t1) # t1 = the value of A[j]
   add t2, t0, t1 # t2 = A[i] + A[j]
   sll t0, s1, 2 # $t0 = 4*g
   add t0, s7, t0 # t0 = Base address of B + 4*g
   sw t2, 0(t0) # t2= value of B[g]