addi $t0, $t0, 4
sll
add
slt
br

2008

1. (1) T (2) F (3) T (4) F (5) F (6) T (7) F (8) T (9) F (10) T

2 (1) DLL = Dynamically Linked Library

(2) JVM = Java virtual Machine

(3) ALU = Arithmetic logic unit

3.
(1) relocation
(2) symbol table.

4. (1) branching instructions.
(2) PC = register (Te: PC+4) + branch address.

5.
(1) move $t0, $a0. 第二小題是在問和左式相同的 MIPS 碼.
add $t0, $zero, $a0. ⟺ move $t0 $zero
add. $t0, $zero, $zero.

(2) $a0 = base address.
$a1 = array size value = 15.
$t0 = i.
問你它的指令要跑幾次
array version = 1+6×15 = 91
pointer version = 1+6×15 = 91

(3)

① move $t0, $a0
sll $t1, $a1, 2
add $t2, $a0, $t1
loop2: sw zero 0($t0)
addi $t0, $t0, 4
slt $t3, $t0, $t2
bne $t3, $zero, loop2.

② 3+4×15 = 63

(4) move $t0, $zero
Loop1: add $t2, $a0, $t1 to
sw $zero, 0 ($t2)
addi $t0, $t0, 1.
slt $t3, $t0, $a1.
bne $t3, $zero, loop1.