

Chapter 2

2.1

```
addi $s0, $s2, -5
add $s0, $s0, $s1
```

2.2

```
f = g + h + i;
```

2.3

```
sub $t0, $s3, $s4
sll $t0, $t0, 2
add $t0, $s6, $t0
lw $t1, 0($t0)
sw $t1, 32($s7)
```

2.4

```
B[g] = A[f] + A[1+f];
```

2.7

題目中 B[8]改為 B[g]

Assume that the elements of the arrays A and B are 4-byte words

```
sll $t0, $s3, 2
add $t0, $t0, $s6
lw $t0, 0($t0)
sll $t1, $s4, 2
add $t1, $t1, $s6
lw $t1, 0($t1)
add $t0, $t1, $t0
sll $s1, $s1, 2
add $t1, $s7, $s1
sw $t0, 0($t1)
```

2.8

題目中指令 add \$t1, \$s6, \$0 改為 add \$t1, \$s6, \$zero

```
f = 2*(&A);
```

2.17

2.17.1 題目中指令 `sll $t2, $t0, 44` 改為 `sll $t2, $t0, 4`

`0xAAAAAAAA << 4 => 0xAAAAAAAA0`

`0xAAAAAAAA0 OR 0x12345678 => 0xBABEFEF8`

2.17.2 `0xAAAAAAAA0`

2.17.3 `0x00005545`

2.24

題目中\$0 皆為\$zero

2.24.1

20

2.24.2

```
i = 10;
while ( i > 0){
    i = i - 1;
    B += 2;
}
```

2.24.3

5N+2

2.27

題目中指令 `addi $t1, $0, 0` 改為 `addi $t1, $zero, 0`

題目中指令 `bne $t2, $s0, LOOP` 改為 `bne $t2, $zero, LOOP`

```
i = 0;
while (i < 100) {
    result+= MemArray[i];
    i++;
}
```