

### 2.29

```
      add $t0, $zero, $zero
loop: beq $a1, $zero, finish
      add $t0, $t0, $a0
      sub $a1, $a1, 1
      j   loop
finish: addi $t0, $t0, 100
      add $v0, $t0, $zero
```

**In one sentence, what does this program compute (in terms of \$a0 and \$a1)?**

### 2.30

```
      sll $a2, $a2, 2
      sll $a3, $a3, 2
      add $v0, $zero, $zero
outer: add $t0, $zero, $zero
      add $t4, $a0, $t0
      lw  $t4, 0($t4)
      add $t1, $zero, $zero
inner: add $t3, $a1, $t1
      lw  $t3, 0($t3)
      bne $t3, $t4, skip
      addi $v0, $v0, 1
skip  addi $t1, $t1, 4
      bne $t1, $a3, inner
      addi $t0, $t0, 4
      bne $t0, $a2, outer
```

**Call the arrays Array1 and Array2.**

**In a sentence or two, what does this program compute?**