

```
1: main:
2:   j wackySum
3:
4: wackySum:
5:   addi $v0, $0, 0 # sum = 0
6:   addi $sp, $sp, -16
7:   addi $s0, $a0, 0 # i = 0
8:
9:   sw $ra, 0($sp)
10:  sw $a0, 4($sp)
11:  sw $a1, 8($sp)
12:  sw $a2, 12($sp)
13:
14:  jal loop
15:
16:  lw $ra, 0($sp)
17:  addi $sp, $sp, 16
18:  jr $ra
19:
20: loop:
21:  lw $t0, 4($sp)
22:  lw $t1, 8($sp)
23:  lw $t2, 12($sp)
24:
25:  # combineFour(i, (i+1)/2, (i+2)/2, (i+3));
26:  addi $a0, $s0, 0
27:  addi $a1, $s0, 1
28:  addi $a2, $s0, 2
29:  addi $a3, $s0, 3
30:  div $a1, $a1, 2
31:  div $a2, $a2, 2
32:
33:  add $s1, $v0, $0
34:
35:  jal combineFour
36:
37:  add $v0, $v0, $s1
38:
39:  add $s0, $s0, $t2
40:  slt $t3, $s0, $t1 # if a < b, t0 = 1
41:
42:  beq $s0, $t1, loop
43:  beq $t3, 1, loop
44:  beq $t3, 0, exit
45:
46: combineFour:
47:  add $v0, $a0, $a1
48:  add $v0, $v0, $a2
49:  add $v0, $v0, $a3
50:
51:  addi $sp, $sp, -8
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```
52:  sw $v0, 0($sp)
53:  sw $ra, 4($sp)
54:
55:  rem $t0, $v0, 2
56:  beq $t0, 1, returnHalf
57:  lw $ra, 4($sp)
58:  addi $sp, $sp, 8
59:  jr $ra
60:
61: returnHalf:
62:  lw $v0, 0($sp)
63:  lw $ra, 4($sp)
64:  addi $sp, $sp, 8
65:  div $v0, $v0, 2
66:  jr $ra
67:
68: exit:
69:  lw $ra, 0($sp)
70:  addi $sp, $s0, 16
71:  jr $ra
```