No.

Date

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HW1

1. addi x18 x18 -12
   add x16 x17 x18
2. add x5 x5 x6
   slli x5 x5 2
   add x6 x5 x16
   lw x5 0(x6)
   sw x5 28(x17)
3. Z[a] = Y[f] + Y[f+1]
4. little-endian 0x0000_0000 0x0000_0001 0x0000_0002 0x0000_0003
   cd. ab 78 56
   Bid-endian 0x0000_0000 0x0000_0001 0x0000_0002 0x0000_0003
   56 78 ab cd
5. addi x28 x0 0x3ff
   slli x28 x28 11 <- slli x29 x28 11
   and x28 x28 x15
   slli x28 x28 11 <- xori x29 x29 -1
   ~~andi x16 x16 0x3fffff~~ <- and x16 x16 x29
   add x16 x16 x28
6. 0xFFFFF000
7. (1) 10 (2) while (j != 0) { (3) 4N+1
   j = j - 1;
   i = i + 2;
   }
   (4) while (j >= 0) {
   j = j - 1;
   i = i + 2;
   }

8 suppose a, b, c, d in x11, x12, x13, x14.
return value of f and g is in x10
g take arguments in x10. x11.

```
f: addi sp sp -24
   sw   x1  20(sp)   # save return addr.
   sw   x11 16(sp)   # save a, b, c, d
   sw   x12 12(sp)
   sw   x13 8(sp)
   sw   x14 4(sp)
   add  x10 x11 0 # move a to x10
   add  x11 x13 0 # move c to x11
   sub  x8  x12 x14 # x8 store b-d
   sw   x8  0(sp) # save b-d
   jal  x1  g     # g(a, b) -> x10
   lw   x11 0(sp) # load b-d
   jal  x1  g     # f(g(a,c), b-d)) -> x10
   lw   x14 4(sp)
   lw   x13 8(sp)
   lw   x12 12(sp)
   lw   x11 16(sp)   # load a,b,c,d.
   lw   x1  20(sp)   # load return addr
   addi sp  sp 24
   jalr x0  0(x1)
```

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9. x10 : g(g(a,c), b-d) x11~x14 are still a, b, c, d since we load them back x8 we don't know since maybe g could use it. x1 is return addr of f.
sp back to. 0x7fffffc.