The Test Code 2 :

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main:
        addi x2, x0, 5
        addi x3, x0, 12
        addi x7, x3, -9
        or x4, x7, x2
        and x5, x3, x4
        add x5, x5, x4
        beq x5, x7, end
        slt x4, x3, x4
        beq x4, x0, LableA
        addi x5, x0, 0
LableA:
        sll x6, x3, x2
        slli x7, x2, 1
        srl x8, x3, x2
        srli x9, x3, 2
        xor x10, x3, x2
        xori x11, x3, 7
        bne x8, x9, LableB
        addi x5, x0, 0
LableB:
        slt x4, x7, x2
        add x7, x4, x5
        sub x7, x7, x2
        sw x7, 84(x3)
        lw x2, 96(x0)
        add x9, x2, x5
        jal x3, end
        addi x2, x0, 1
end:
        add x2, x2, x9
        sw x2, 0x20(x3)

done:
        beq x2, x2, done
```

Instruction	Output	Address	Machine code
addi x2, x0, 5	x2 = 0 +5 = 5	0x00	00500113
addi x3, x0, 12	x3 = 0 + 12 =12	0x04	00c00193
addi x7, x3, -9	x7 = 12 – 9 = 3	0x08	ff718393
or x4, x7, x2	x4 = 3 | 5 =7	0x0C	0023e233
and x5, x3, x4	x5 = 12 & 7 =4	0x10	0041f2b3
add x5, x5, x4	x5 = 4 + 7 = 11	0x14	004282b3
beq x5, x7, end	No jump	0x18	04728863
slt x4, x3, x4	x4 =(12 < 7)= 0	0x1C	0041a233
beq x4, x0, LableA	Jump to LableA	0x20	00020463
addi x5, x0, 0	Not executed	0x24	00000293
sll x6, x3, x2	x6 = 12 << 5= 384	0x28	00219333
slli x7, x2, 1	x7 = 5 << 1 = 10	0x2C	00111393
srl x8, x3, x2	x8 = 12 >> 5= 0	0x30	0021d433
srli x9, x3, 2	x9 = 12 >> 2= 3	0x34	0021d493
xor x10, x3, x2	x10 = 12 ^ 5 = 9	0x38	0021c533
xori x11, x3, 7	x11 = 12 ^ 7 = 11	0x3C	0071c593
bne x8, x9, LableB	jump to LableB	0x40	00941463
addi x5, x0, 0	Not executed	0x44	00000293
slt x4, x7, x2	x4 = (10 < 5)= 0	0x48	0023a233
add x7, x4, x5	x7 = 0 + 11 = 11	0x4C	005203b3
sub x7, x7, x2	x7 = 11 - 5 = 6	0x50	402383b3
sw x7, 84(x3)	Memory[96]= 6	0x54	0471aa23
lw x2, 96(x0)	x2=Mem[96]=6	0x58	06002103
add x9, x2, x5	x9 = 6 + 11 = 17	0x5C	005104b3
jal x3, end	Jump to end	0x60	008001ef
addi x2, x0, 1	Not executed	0x64	00100113
add x2, x2, x9	x2 = 6 + 17 = 23	0x68	00910133
sw x2, 0x20(x3)	Mem[132] = 23	0x6C	0221a023
beq x2, x2, done	Infinite loop (x2 == x2)	0x70	00210063

x2 = 5 , 6 , 23

x3 = 12 , 100 = 0x64

x4 = 7 , 0

x5 = 4 , 11

x6 = 384

x7 = 3 , 10 , 11 , 6

x8 = 0

x9 = 3 , 17

x10 = 9

x11 = 11

[96] = 6

[132] = 23