```
test09
 0:
       call t0 <- Input
       assign a <- t0
   2_while_cond:
              a >= 0 goto 3_while_body
       goto
   3_while_body:
       param 0 <- a
             t1 <- sum_rec
       call
       param 0 <- t1
       call
              Output (
10:
       param 0 <- a
11:
       call
             t2 <- sum_iter
       param
             0 <- t2
13:
       call
              Output 0
14:
       param 0 <- a
15:
       call t3 <- sum_alg
       param
              0 <- t3
17:
       call
              Output (
18:
       call
              t4 <- Input
19:
       assign a <- t4
       goto 2_while_cond
```

21: 1:

```
sum rec
              n > 0 goto 1_if_true
       goto
              2_if_false
2: 1_if_true:
              t0 <- n, 1
       sub
              0 <- t0
       param
       call
             t1 <- sum rec
              t2 <- n, t1
       add
       return t2
       goto 0
 9: 2_if_false:
10:
       return 0
11: 0:
```

```
sum_iter
       assign sum <- 0
       assign i <- 0
   3_while_cond:
       if
              i <= n goto 4_while_body
       goto
   4_while_body:
              t0 <- sum, i
       assign sum <- t0
       add t1 <-i, 1
       assign i <- t1
       goto 3_while_cond
11: 2:
12:
       return sum
```

```
sum_alg
0: add t0 <- n, 1
1: mul t1 <- n, t0
2: div t2 <- t1, 2
3: return t2
```