

0000000000000000111	0	start:	lodd	daddr:
111101000000000000	1		push	; push data adr
00000000000001101	2		lodd	dcnt:
111101000000000000	3		push	; push data cnt
1110000000010100	4		call	addr:
0001000000001110	5		stod	rslt:
1111111000000000	6		halt	
0000000000001000	7	daddr:	data:	; or → 8
0000000000011001	8	data:	25	
0000000000110010	9		50	
0000000001001011	10		75	
0000000001100100	11		100	
000000000111101	12		125	
0000000000000101	13	dcnt:	5	
0000000000000000	14	rslt:	0	
1111111111111111	15		-1	
1111111111111111	16		-1	
1111111111111111	17		-1	
1111111111111111	18		-1	
1111111111111111	19		-1	

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	0
AC	0
SP	1024

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
1024

← SP

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	1
AC	8
SP	1024

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
1024

← SP

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	2
AC	8
SP	1023

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
8
-1

1024

← SP

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	3
AC	5
SP	1023

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
8
-1

← SP

1024

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call adder:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	4
AC	5
SP	1022

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
5
8
-1

← SP

1024

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

PC	5 ➔ 20
AC	5
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
5
5
8
-1

← SP

1024

1000000000000001	20	add:	lodl 1
0001000000101010	21		stod mycnt:
1000000000000010	22		lodl 2
1111000000000000	23		pshi
0010000000101100	24		addd myc1:
0001000000101011	25		stod myptr:
0000000000101010	26	loop:	lodd mycnt:
0011000000101100	27		subd myc1:
0101000000100111	28		jzer done:
0001000000101010	29		stod mycnt:
0000000000101011	30		lodd myptr:
1111000000000000	31		pshi
0010000000101100	32		addd myc1:
0001000000101011	33		stod myptr:
1111011000000000	34		pop
1010000000000000	35		addl 0
1111110000000001	36		insp 1
1111010000000000	37		push
0110000000011010	38		jump loop:
1111011000000000	39	done:	pop
1111100000000000	40		ret n
1111111100000000	41		halt
0000000000000000	42	mycnt:	0
0000000000000000	43	myptr:	0
0000000000000001	44	myc1:	1


```

20 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
  adder: 1 odl 1
        st od mycnt:
21      lodl 2
22      pshi
23      addd myc1:
24      st od mypt r:
25      lodd mycnt:
26  loop: subd myc1:
27          jzer done:
28          st od mycnt:
29          lodd mypt r:
30          pshi
31          addd myc1:
32          st od mypt r:
33          pop
34          addl 0
35          insp 1
36          push
37          jump 1 loop:
38          pop
39  done: ret n
40          halt
41          0
42  mycnt: 0
43  mypt r: 0
44  myc1: 1

```

1024

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
5
5
8
- 1

← SP

PC	20
AC	5
SP	1021

20	addr:	1	odl	1	
21		st od	mycnt:		
22		1 odl	2		
23		pshi			
24		add	myc1:		
25		st od	myptr:		
26	loop:	1 odl	mycnt:		
27		subd	myc1:		
28		jzer	done:		
29		st od	mycnt:		
30		1 odl	myptr:		
31		pshi			
32		add	myc1:		
33		st od	myptr:		
34		pop			
35		add	0		
36		insp	1		
37		push			
38		jump	loop:		
39	done:	pop			
40		retn			
41		halt			
42	mycnt:	0			
43	myptr:	0			
44	myc1:	1			1

PC	21
AC	5
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
-1
-1
5
5
8
-1

SP+1
← SP

```
20  addr: 1 odl 1
21  st od mycnt:
22  1 odl 2
23  pshi
24  addd myc1:
25  st od myptr:
26  1 odd mycnt:
27  subd myc1:
28  jzer done:
29  st od mycnt:
30  1 odd myptr:
31  pshi
32  addd myc1:
33  st od myptr:
34  pop
35  addl 0
36  insp 1
37  push
38  jump 1 loop:
39  done: pop
40  retn
41  halt
42  mycnt: 0 ➔ 5
43  myptr: 0
44  myc1: 1
```

1024

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
5
5
8
- 1

← SP

PC	22
AC	5
SP	1021

20

adder:

1

odl

1

21

st od

mycnt:

2

22

1

odl

2

23

pshi

24

add

myc1:

25

st od

mypt r:

26

1

od

mycnt:

27

subd

myc1:

28

jzer

done:

29

st od

mycnt:

30

1

od

mypt r:

31

pshi

32

add

myc1:

33

st od

mypt r:

34

pop

35

add

0

36

i nsp

1

37

push

38

j ump

1

oop:

39

pop

40

ret n

41

halt

42

mycnt:

0

→

5

43

mypt r:

0

44

myc1:

1

1024

PC	23
AC	8
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
-1
5
5
8
-1

← SP

SP+2

```

20  addr:  lodl 1
21  st od mycnt:
22  lodl 2
23  pshi
24  addd myc1:
25  st od mypt r:
26  loop:  lodd mycnt:
27         subd myc1:
28         jzer done:
29         st od mycnt:
30         lodd mypt r:
31         pshi
32         addd myc1:
33         st od mypt r:
34         pop
35         addl 0
36         insp 1
37         push
38         jump loop:
39         done:  pop
40                 ret n
41                 halt
42         mycnt: 0 ➡ 5
43         mypt r: 0
44         myc1: 1

```

1024

PC	24
AC	8
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1         push
2         lodd dent:
3         push
4         call addr:
5         st od rslt:
6         halt
7  daddr: 8
8         25
9         50
10        75
11        100
12        125
13  dent: 5
14  rslt: 0
15        -1
16        -1
17        -1
18        -1
19        -1

```

```

20  addr:  lodl 1
21  st od mycnt:
22  lodl 2
23  pshi
24  addd myc1:
25  st od mypt r:
26  loop:  lodd mycnt:
27  subd myc1:
28  jzer done:
29  st od mycnt:
30  lodd mypt r:
31  pshi
32  addd myc1:
33  st od mypt r:
34  pop
35  addl 0
36  insp 1
37  push
38  jump loop:
39  done:  pop
40  ret n
41  halt
42  mycnt: 0 ➡ 5
43  mypt r: 0
44  myc1: 1

```

1024

PC	25
AC	9
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1  push
2  lodd dent:
3  push
4  call addr:
5  st od rslt:
6  halt
7  daddr: 8
8  25
9  50
10 75
11 100
12 125
13 dent: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done:   pop
40          ret n
41          halt
42  mycnt: 0 ➡ 5
43  mypt r: 0 ➡ 9
44  myc1:  1                                1024

```

PC	26
AC	9
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```
20  adder: lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 5
43  mypt r: 0 ➡ 9
44  myc1: 1                                1024
```

PC	27
AC	5
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

0 start: lodd daddr:
1 push
2 lodd dent:
3 push
4 call adder:
5 st od rslt:
6 halt
7 daddr: 8
8 25
9 50
10 75
11 100
12 125
13 dent: 5
14 rslt: 0
15 -1
16 -1
17 -1
18 -1
19 -1


```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 5
43  mypt r: 0 ➡ 9
44  myc1: 1

```

1024

PC	28
AC	4
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 5
43  mypt r: 0 ➡ 9
44  myc1: 1

```

1024

PC	29
AC	4
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  adder:  lodl 1
21          st od mycnt:
22          lodl 2
23          pshi
24          addd myc1:
25          st od mypt r:
26  loop:   lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done:   pop
40          ret n
41          halt
42  mycnt:  0 ➡ 4
43  mypt r: 0 ➡ 9
44  myc1:   1

```

1024

PC	30
AC	4
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call adder:
5          st od rslt:
6          halt
7  daddr:  8
8          25
9          50
10         75
11         100
12         125
13  dent:  5
14  rslt:  0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31          pshi
32      addd myc1:
33      st od mypt r:
34          pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40          ret n
41          halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 9
44  myc1: 1

```

1024

PC	31
AC	9
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 9
44  myc1: 1

```

1024

PC	32
AC	9
SP	1019

-1
-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call adder:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40          ret n
41          halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 9
44  myc1: 1

```

1024

PC	33
AC	10
SP	1019

-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1 1024

```

PC	34
AC	10
SP	1019

-1
-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	35
AC	50
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```



```

20  addr:  lodl 1
21          st od mycnt:
22  lodl 2
23  pshi
24  addd myc1:
25  st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done:  pop
40          ret n
41          halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	36
AC	<u>75</u> ← 50 + 25
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	37
AC	75
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
50
25
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  adder: lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	38
AC	75
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call adder:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22  lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	39 ➡ 26
AC	75
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	27
AC	4
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	28
AC	3
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 4
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	29
AC	3
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump 1 oop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 10
44  myc1: 1 1024

```

PC	30
AC	3
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11        100
12        125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19        -1

```



```

20  addr: 1  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump 1 loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 10
44  myc1: 1 1024

```

PC	31
AC	10
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
50
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done:  pop
40          ret n
41          halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 10
44  myc1: 1

```

1024

PC	32
AC	10
SP	1019

-1
-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11        100
12        125
13  dent: 5
14  rslt: 0
15        -1
16        -1
17        -1
18        -1
19        -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 10
44  myc1: 1 1024

```

PC	33
AC	11
SP	1019

-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:  lodl 1
21          st od mycnt:
22          lodl 2
23          pshi
24          addd myc1:
25          st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done:  pop
40          ret n
41          halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	34
AC	11
SP	1019

-1
-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	35
AC	75
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22  1 odl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  1 oop: 1 odd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      1 odd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump 1 oop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	36
AC	<u>150</u> ← 75 + 75
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0 start: 1 odd daddr:
1      push
2      1 odd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  adder: lodl 1
21      st od mycnt:
22  lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done: pop
40          ret n
41          halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	37
AC	150
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
75
75
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call adder:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  adder: lodl 1
21      st od mycnt:
22  lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27          subd myc1:
28          jzer done:
29          st od mycnt:
30          lodd mypt r:
31          pshi
32          addd myc1:
33          st od mypt r:
34          pop
35          addl 0
36          insp 1
37          push
38          jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	38
AC	150
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
75
150
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call adder:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```



```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38  jump loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1

```

1024

PC	39 ➡ 26
AC	150
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
75
150
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8          25
9          50
10         75
11        100
12        125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19        -1

```

```

20  addr: 1 odl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop: lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done: pop
40      ret n
41      halt
42  mycnt: 0 ➡ 3
43  mypt r: 0 ➡ 11
44  myc1: 1 1024

```

PC	27
AC	3
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
75
150
5
5
8
-1

← SP

```

0 start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13 dent: 5
14 rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

```

20  addr:
21  lodl 1
22  st od mycnt:
23  lodl 2
24  pshi
25  addd myc1:
26  st od mypt r:
27  lodl mycnt:
28  subd myc1:
29  jzer done:
30  st od mycnt:
31  lodl mypt r:
32  pshi
33  addd myc1:
34  st od mypt r:
35  pop
36  addl 0
37  insp 1
38  push
39  jump 1 oop:
40  pop
41  retn
42  halt
43  mycnt: 0 ➡ 1
44  mypt r: 0 ➡ 12
45  myc1: 1

```

**AFTER 2 MORE
ITERATIONS:**

PC	27
AC	1
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
125
375
5
5
8
-1

← SP

```

0 start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call adder:
5          st od rslt:
6          halt
7 daddr: 8
8          25
9          50
10         75
11         100
12         125
13 dent: 5
14 rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27      subd myc1:
28      jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump 1 loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 0
43  mypt r: 0 ➡ 12
44  myc1: 1 1024

```

PC	28
AC	0
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
125
375
5
5
8
-1

← SP

```

0  start: lodd daddr:
1      push
2      lodd dent:
3      push
4      call addr:
5      st od rslt:
6      halt
7  daddr: 8
8      25
9      50
10     75
11     100
12     125
13  dent: 5
14  rslt: 0
15     -1
16     -1
17     -1
18     -1
19     -1

```

20

addr:

1

21

st od mycnt:

2

22

lodl

2

23

pshi

24

addd myc1:

25

st od mypt r:

26

loop:

1

27

lodd mycnt:

28

subd myc1:

28

jzer done:

29

st od mycnt:

30

lodd mypt r:

31

pshi

32

addd myc1:

33

st od mypt r:

34

pop

35

addl 0

36

insp 1

37

push

38

jump loop:

39

done:

40

pop

41

ret n

41

halt

42

mycnt:

0

1

43

mypt r:

0

12

44

myc1:

1

1024

PC	29 → 39
AC	0
SP	1020

-1
-1
-1
-1
-1
-1
-1
-1
-1
75
375
5
5
8
-1

← SP

0

start:

l odd

d addr:

1

push

2

l odd

dent:

3

push

4

call

addr:

5

st od

rs lt:

6

halt

7

d addr:

8

25

50

75

100

125

13

dent:

5

14

rs lt:

0

-1

-1

-1

-1

-1

19

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 1
43  mypt r: 0 ➡ 12
44  myc1: 1

```

1024

PC	40
AC	375
SP	1021

-1
-1
-1
-1
-1
-1
-1
-1
-1
75
375
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11         100
12         125
13  dent: 5
14  rslt: 0
15         -1
16         -1
17         -1
18         -1
19         -1

```

```

20  addr:  lodl 1
21      st od mycnt:
22      lodl 2
23      pshi
24      addd myc1:
25      st od mypt r:
26  loop:  lodd mycnt:
27          subd myc1:
28          jzer done:
29      st od mycnt:
30      lodd mypt r:
31      pshi
32      addd myc1:
33      st od mypt r:
34      pop
35      addl 0
36      insp 1
37      push
38      jump loop:
39  done:  pop
40      ret n
41      halt
42  mycnt: 0 ➡ 1
43  mypt r: 0 ➡ 12
44  myc1: 1

```

1024

PC	41 ➡ 5
AC	375
SP	1022

-1
-1
-1
-1
-1
-1
-1
-1
-1
75
375
5
5
8
-1

← SP

```

0  start: lodd daddr:
1          push
2          lodd dent:
3          push
4          call addr:
5          st od rslt:
6          halt
7  daddr: 8
8          25
9          50
10         75
11        100
12        125
13  dent: 5
14  rslt: 0
15        -1
16        -1
17        -1
18        -1
19        -1

```

0 start: 1 odd daddr:
1 push
2 1 odd dcnt:
3 push
4 call addr:
5 st od rslt:
6 halt
7 daddr: data:
8 data: 25
9 50
10 75
11 100
12 125
13 dcnt: 5
14 rslt: 0 ➡ 375
15 -1
16 -1
17 -1
18 -1
19 -1

PC	6
AC	375
SP	1022

-1	
-1	
-1	
-1	
-1	
-1	
-1	
-1	
75	
375	
5	
5	← SP
8	
-1	

1024