
Lab #2

Average of Eight



Florida Polytechnic
University

EEL4746C: Microcomputers

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Student Name: Peter A. Dranishnikov

Student ID: U0000005258

Lab Partner(s): N/A

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Introduction

The purpose of this laboratory assignment was to design and implement a program to determine the average of eight unsigned 8-bit numbers using AVR assembly.

Discussion

The code below summed the numbers partially into memory, with assignment and summation by parts from conditional branching. The division was performed using repeated subtraction, as there was no division instruction in AVR. The subtraction also doubled as a comparison for the stopping condition of the division. Custom values may have been substituted in the opX field (where X is a whole number from 1 to 8, inclusive), not exceeding 255 unsigned.

```
#####
# Filename: lab2-4.asm
# Version: 1.0
# Description: Computes the (integer) average of 8, 8-bit numbers
# Author: Peter A. Dranishnikov
# Target: Atmel AtMega328p AVR
# Assembler: avr-as (GNU)
# Last modified: Thursday, October 4th 2018, 23:18:27 EST
#####

.global start
.text
.org 0x0000

.set op1, 200
.set op2, 123
.set op3, 2
.set op4, 32
.set op5, 21
.set op6, 111
.set op7, 97
.set op8, 255

.set zero, 0
.set one, 1

reset_vector:
    jmp start

.org 0x0100
start:
    ldi r16, lo8(op1)
    ldi r17, lo8(op2)
    ldi r18, lo8(op3)
    ldi r19, lo8(op4)
    ldi r20, lo8(op5)
    ldi r21, lo8(op6)
    ldi r22, lo8(op7)
    ldi r23, lo8(op8)
    ldi r24, lo8(zero)
    ldi r25, lo8(one)
    sts ps1+1, r24
    sts ps2+1, r24
    sts ps3+1, r24
```

```

sts ps4+1, r24

#since 8*255 < 2^16-1, there is no risk of overflow
    add r16, r17
    brcc sk1 ;skips if no carry
    sts ps1+1, r25 ;assigns carry bit to next byte
sk1:
    sts ps1, r16

    add r18, r19
    brcc sk2
    sts ps2+1, r25
sk2:
    sts ps2, r18

    add r20, r21
    brcc sk3
    sts ps3+1, r25
sk3:
    sts ps3, r20

    add r22, r23
    brcc sk4
    sts ps4+1, r25
sk4:
    sts ps4, r22

#partial addition
    lds r16, ps1
    lds r17, ps1+1
    lds r18, ps2
    lds r19, ps2+1
    lds r20, ps3
    lds r21, ps3+1
    lds r22, ps4
    lds r23, ps4+1

    add r16, r18
    adc r17, r19
    sts ps1, r16
    sts ps1+1, r17

    add r20, r22
    adc r21, r23
    sts ps2, r20
    sts ps2+1, r21

#final addition
    lds r16, ps1
    lds r17, ps1+1
    lds r18, ps2
    lds r19, ps2+1

    add r16, r18
    adc r17, r19

```

```

sts sum, r16
sts sum+1, r17

#division part
#IMHO, I would perform a LSR and an ASR here on all parts and handle carryover since
#denominator is 8, but since hint mentioned division by subtraction, here it is

lds r16, sum
lds r17, sum+1
ldi r18, 0 ;counter
ldi r19, 8 ;denominator

divloop:
    sub r16, r19
    brlo borrower
    inc r18
    rjmp divloop
borrower:
#see if upper byte has values, subtract as necessary
    sub r17, r25 ;cannot use dec due to flag behaviour
    brlo infloop
    inc r18
    rjmp divloop

infloop:
    rjmp infloop
.data
.org 0x00A0
#even if all values are full (255), then only 2 bytes are needed for each variable
ps1:
    .skip 2 ;1st partial sum in ISRAM
ps2:
    .skip 2 ;2nd partial sum in ISRAM
ps3:
    .skip 2 ;3rd partial sum in ISRAM
ps4:
    .skip 2 ;4th partial sum in ISRAM
sum:
    .skip 2 ;full sum
.end

```

Experimental procedure

The algorithm was designed within specifications. Implementation of the algorithm into AVR assembly was done in a plain text editor. The complete assembly program (as a text file) was assembled, linked, loaded, and debugged using the GNU toolchain for AVR. For stepping, a custom definition named “logview” with the “si” (step into), “i” (info registers), and “x /8hx 0x0100” (view 8 half-bytes from start of data memory in hexadecimal) streamlined the logging process.

Results/Measurements/Observations

Appendix B contains the full log of the assembly, linking, loading, and stepping parts of the program. The in-memory disassembly is located on page [341](#). The values were chosen for testing the full extent of the program.

Result Discussion

An alternative, more efficient solution instead of repeated subtraction is to shift right by 3 for each byte of the sum. Otherwise, the code behaved as expected.

Conclusion

It is possible to divide an integer by repeated subtraction.

Answers to lab's questions

File “lab2-2.asm” (Appendix A): What does this code do?

The program loads 2 values from the declared directives, and performs repeated addition of the value of “op1” and the repeated decrementation of “op2” in a do-while loop structure until “op2” equals 1, which is the first loop’s terminating condition. The second loop infinitely loops when entered.

Appendix A: lab2-2.asm

```
#NOTE: no header was provided, since it was written in class
```

```
#The author is Dr. Youssif Al-nashif
```

```
.global start
.text
.org 0x0000
```

```
.set op1, 15
.set op2, 16
```

```
reset_vector:
    jmp start
```

```
.org 0x0100
```

```
start:
```

```
    ldi r16, lo8(op1)
    ldi r17, lo8(op2)
    ldi r18, 0
    ldi r19, 1
```

```
do: ;do-while loop
    add r18, r16
    sub r17, r19
```

```
while:
```

```
    brne do
```

```
infiniteloop:
```

```
    rjmp infiniteloop
```

```
.end
```

Appendix B: Full Runtime Debug Log:

```
user@ubuntu:~/atmega328p/asm/lab2$ avr-as -mmcu=atmega328p -ggdb -o lab2-4.o lab2-4.asm -a
GAS LISTING lab2-4.asm          page 1
```

```
1 ######
2      # Filename: lab2-4.asm
3      # Version: 1.0
4      # Description: Computes the (integer) average of 8, 8-bit numbers
5      # Author: Peter A. Dranishnikov
6      # Target: Atmel AtMega328p AVR
7      # Assembler: avr-as (GNU)
8      # Last modified: Thursday, October 4th 2018, 23:18:27 EST
9 #####
10
```

```

11          .global start
12          .text
13          .org 0x0000
14
15          .set op1, 200
16          .set op2, 123
17          .set op3, 2
18          .set op4, 32
19          .set op5, 21
20          .set op6, 111
21          .set op7, 97
22          .set op8, 255
23
24          .set zero, 0
25          .set one, 1
26
27          reset_vector:
28 0000 0C94 0000      jmp start
29
30 0004 0000 0000      .org 0x0100
30 0000 0000
30 0000 0000
30 0000 0000
30 0000 0000
31
31          start:
32 0100 08EC      ldi r16, lo8(op1)
33 0102 1BE7      ldi r17, lo8(op2)
34 0104 22E0      ldi r18, lo8(op3)
35 0106 30E2      ldi r19, lo8(op4)
36 0108 45E1      ldi r20, lo8(op5)
37 010a 5FE6      ldi r21, lo8(op6)
38 010c 61E6      ldi r22, lo8(op7)
39 010e 7FEF      ldi r23, lo8(op8)
40 0110 80E0      ldi r24, lo8(zero)
41 0112 91E0      ldi r25, lo8(one)
42 0114 8093 0000  sts ps1+1, r24
43 0118 8093 0000  sts ps2+1, r24
44 011c 8093 0000  sts ps3+1, r24
45 0120 8093 0000  sts ps4+1, r24
46
47          #since 8*255 < 2^16-1, there is no risk of overflow
48 0124 010F      add r16, r17
49 0126 00F4      brcc sk1 ;skips if no carry
50 0128 9093 0000  sts ps1+1, r25 ;assigns carry bit to next byte
51
52 012c 0093 0000  sk1:   sts ps1, r16
53

```

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```

54 0130 230F      add r18, r19
55 0132 00F4      brcc sk2
56 0134 9093 0000  sts ps2+1, r25
57
58 0138 2093 0000  sk2:   sts ps2, r18
59
60 013c 450F      add r20, r21

```

```

61 013e 00F4          brcc sk3
62 0140 9093 0000      sts ps3+1, r25
63                               sk3:
64 0144 4093 0000      sts ps3, r20
65
66 0148 670F          add r22, r23
67 014a 00F4          brcc sk4
68 014c 9093 0000      sts ps4+1, r25
69                               sk4:
70 0150 6093 0000      sts ps4, r22
71
72          #partial addition
73 0154 0091 0000      lds r16, ps1
74 0158 1091 0000      lds r17, ps1+1
75 015c 2091 0000      lds r18, ps2
76 0160 3091 0000      lds r19, ps2+1
77 0164 4091 0000      lds r20, ps3
78 0168 5091 0000      lds r21, ps3+1
79 016c 6091 0000      lds r22, ps4
80 0170 7091 0000      lds r23, ps4+1
81
82 0174 020F          add r16, r18
83 0176 131F          adc r17, r19
84 0178 0093 0000      sts ps1, r16
85 017c 1093 0000      sts ps1+1, r17
86
87 0180 460F          add r20, r22
88 0182 571F          adc r21, r23
89 0184 4093 0000      sts ps2, r20
90 0188 5093 0000      sts ps2+1, r21
91
92          #final addition
93 018c 0091 0000      lds r16, ps1
94 0190 1091 0000      lds r17, ps1+1
95 0194 2091 0000      lds r18, ps2
96 0198 3091 0000      lds r19, ps2+1
97
98 019c 020F          add r16, r18
99 019e 131F          adc r17, r19
100 01a0 0093 0000      sts sum, r16
101 01a4 1093 0000      sts sum+1, r17
102
103          #division part
104 carryover since    #IMHO, I would perform a LSR and an ASR here on all parts and handle
105 here it is         #denominator is 8, but since hint mentioned division by subtraction,
106
107 01a8 0091 0000      lds r16, sum
108 01ac 1091 0000      lds r17, sum+1
109 01b0 20E0          ldi r18, 0 ;counter
110 01b2 38E0          ldi r19, 8 ;denominator

```

```

111
112          divloop:
113 01b4 031B      sub r16, r19

```

```

114 01b6 00F0          brlo borrower
115 01b8 2395          inc r18
116 01ba 00C0          rjmp divloop
117                                borrower:
118                                #see if upper byte has values, subtract as necessary
119 01bc 191B          sub r17, r25 ;cannot use dec due to flag behaviour
120 01be 00F0          brlo infloop
121 01c0 2395          inc r18
122 01c2 00C0          rjmp divloop
123
124          infloop:
125 01c4 00C0          rjmp infloop
126          .data
127 0000 0000 0000      .org 0x00A0
127          0000 0000
127          0000 0000
127          0000 0000
127          0000 0000
128          #even if all values are full (255), then only 2 bytes are needed for
each variable
129          ps1:
130 00a0 0000          .skip 2 ;1st partial sum in ISRAM
131          ps2:
132 00a2 0000          .skip 2 ;2nd partial sum in ISRAM
133          ps3:
134 00a4 0000          .skip 2 ;3rd partial sum in ISRAM
135          ps4:
136 00a6 0000          .skip 2 ;4th partial sum in ISRAM
137          sum:
138 00a8 0000          .skip 2 ;full sum
139          .end

```

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DEFINED SYMBOLS

lab2-4.asm:31	.text:0000000000000000100	start
lab2-4.asm:15	*ABS*:0000000000000000c8	op1
lab2-4.asm:16	*ABS*:00000000000000007b	op2
lab2-4.asm:17	*ABS*:00000000000000002	op3
lab2-4.asm:18	*ABS*:000000000000000020	op4
lab2-4.asm:19	*ABS*:000000000000000015	op5
lab2-4.asm:20	*ABS*:00000000000000006f	op6
lab2-4.asm:21	*ABS*:000000000000000061	op7
lab2-4.asm:22	*ABS*:00000000000000ff	op8
lab2-4.asm:24	*ABS*:0000000000000000	zero
lab2-4.asm:25	*ABS*:0000000000000001	one
lab2-4.asm:27	.text:0000000000000000	reset_vector
lab2-4.asm:129	.data:00000000000000a0	ps1
lab2-4.asm:131	.data:00000000000000a2	ps2
lab2-4.asm:133	.data:00000000000000a4	ps3
lab2-4.asm:135	.data:00000000000000a6	ps4
lab2-4.asm:51	.text:0000000000000012c	sk1
lab2-4.asm:57	.text:00000000000000138	sk2
lab2-4.asm:63	.text:00000000000000144	sk3
lab2-4.asm:69	.text:00000000000000150	sk4
lab2-4.asm:137	.data:00000000000000a8	sum
lab2-4.asm:112	.text:000000000000001b4	divloop
lab2-4.asm:117	.text:000000000000001bc	borrower

```
lab2-4.asm:124      .text:00000000000001c4 infloop
```

NO UNDEFINED SYMBOLS

```
user@ubuntu:~/atmega328p/asm/lab2$ avr-ld -o lab2-4.x lab2-4.o
user@ubuntu:~/atmega328p/asm/lab2$ avr-gdb
GNU gdb (GDB) 7.10.1
Copyright (C) 2015 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law. Type "show copying"
and "show warranty" for details.
This GDB was configured as "--host=x86_64-linux-gnu --target=avr".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.
For help, type "help".
Type "apropos word" to search for commands related to "word".
(gdb) target remote localhost:1212
Remote debugging using localhost:1212
0x00000000 in ?? ()
(gdb) file lab2-4.x
A program is being debugged already.
Are you sure you want to change the file? (y or n) y
Reading symbols from lab2-4.x...done.
(gdb) load lab2-4.x
Loading section .text, size 0x1c6 lma 0x0
Loading section .data, size 0xaa lma 0x1c6
Start address 0x100, load size 624
Transfer rate: 4992 bits in <1 sec, 312 bytes/write.
(gdb) define logview
Type commands for definition of "logview".
End with a line saying just "end".
>si
>i r
>x /8hx 0x0100
>end
(gdb) logview
33      ldi r17, lo8(op2)
r0      0xaa    170
r1      0xaa    170
r2      0xaa    170
r3      0xaa    170
r4      0xaa    170
r5      0xaa    170
r6      0xaa    170
r7      0xaa    170
r8      0xaa    170
r9      0xaa    170
r10     0xaa    170
r11     0xaa    170
r12     0xaa    170
r13     0xaa    170
r14     0xaa    170
r15     0xaa    170
r16     0xc8    200
r17     0xaa    170
r18     0xaa    170
```

```

r19          0xaa   170
r20          0xaa   170
r21          0xaa   170
r22          0xaa   170
r23          0xaa   170
r24          0xaa   170
r25          0xaa   170
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x102  258
---Type <return> to continue, or q <return> to quit---
pc          0x102  0x102 <start+2>
0x800100: 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa
(gdb) 34 ldi r18, lo8(op3)
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc8   200
r17         0x7b   123
r18         0xaa   170
r19         0xaa   170
r20         0xaa   170
r21         0xaa   170
r22         0xaa   170
r23         0xaa   170
r24         0xaa   170
r25         0xaa   170
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x104  260
---Type <return> to continue, or q <return> to quit---
pc          0x104  0x104 <start+4>
0x800100: 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa

```

```
(gdb)
35      ldi r19, lo8(op4)
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xc8   200
r17     0x7b   123
r18     0x2    2
r19     0xaa   170
r20     0xaa   170
r21     0xaa   170
r22     0xaa   170
r23     0xaa   170
r24     0xaa   170
r25     0xaa   170
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x0    0
SP      0x0    0x0 <reset_vector>
PC2    0x106  262
---Type <return> to continue, or q <return> to quit---
pc      0x106  0x106 <start+6>
0x800100: 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa
(gdb)
36      ldi r20, lo8(op5)
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xc8   200
```

```

r17          0x7b    123
r18          0x2      2
r19          0x20    32
r20          0xaa    170
r21          0xaa    170
r22          0xaa    170
r23          0xaa    170
r24          0xaa    170
r25          0xaa    170
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x108   264
---Type <return> to continue, or q <return> to quit---
pc           0x108   0x108 <start+8>
0x800100: 0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa
(gdb)
37          ldi r21, lo8(op6)
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0xc8    200
r17          0x7b    123
r18          0x2      2
r19          0x20    32
r20          0x15    21
r21          0xaa    170
r22          0xaa    170
r23          0xaa    170
r24          0xaa    170
r25          0xaa    170
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x10a   266
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x10a    0x10a <start+10>
0x800100: 0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa
(gdb)
38         ldi r22, lo8(op7)
r0         0xaa     170
r1         0xaa     170
r2         0xaa     170
r3         0xaa     170
r4         0xaa     170
r5         0xaa     170
r6         0xaa     170
r7         0xaa     170
r8         0xaa     170
r9         0xaa     170
r10        0xaa     170
r11        0xaa     170
r12        0xaa     170
r13        0xaa     170
r14        0xaa     170
r15        0xaa     170
r16        0xc8     200
r17        0x7b     123
r18        0x2      2
r19        0x20     32
r20        0x15     21
r21        0x6f     111
r22        0xaa     170
r23        0xaa     170
r24        0xaa     170
r25        0xaa     170
r26        0xaa     170
r27        0xaa     170
r28        0xaa     170
r29        0xaa     170
r30        0xaa     170
r31        0xaa     170
SREG       0x0      0
SP         0x0      0x0 <reset_vector>
PC2        0x10c    268
---Type <return> to continue, or q <return> to quit---
pc          0x10c    0x10c <start+12>
0x800100: 0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa
(gdb)
39         ldi r23, lo8(op8)
r0         0xaa     170
r1         0xaa     170
r2         0xaa     170
r3         0xaa     170
r4         0xaa     170
r5         0xaa     170
r6         0xaa     170
r7         0xaa     170
r8         0xaa     170
r9         0xaa     170
r10        0xaa     170
r11        0xaa     170
r12        0xaa     170
r13        0xaa     170
r14        0xaa     170

```

```

r15          0xaa   170
r16          0xc8   200
r17          0x7b   123
r18          0x2    2
r19          0x20   32
r20          0x15   21
r21          0x6f   111
r22          0x61   97
r23          0xaa   170
r24          0xaa   170
r25          0xaa   170
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x10e   270
---Type <return> to continue, or q <return> to quit---
pc          0x10e   0x10e <start+14>
0x800100: 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa 0xaaaa
(gdb)      ldi r24, lo8(zero)
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc8   200
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0xaa   170
r25         0xaa   170
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x110    272
---Type <return> to continue, or q <return> to quit---
pc          0x110    0x110 <start+16>
0x800100: 0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa
(gdb)      ldi r25, lo8(one)
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xc8     200
r17         0x7b     123
r18         0x2      2
r19         0x20     32
r20         0x15     21
r21         0x6f     111
r22         0x61     97
r23         0xff     255
r24         0x0      0
r25         0xaa     170
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2          0x112    274
---Type <return> to continue, or q <return> to quit---
pc          0x112    0x112 <start+18>
0x800100: 0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa    0xaaaa
(gdb)      sts ps1+1, r24
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc8   200
r17          0x7b   123
r18          0x2    2
r19          0x20   32
r20          0x15   21
r21          0x6f   111
r22          0x61   97
r23          0xff   255
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x114  276
---Type <return> to continue, or q <return> to quit---
pc           0x114  0x114 <start+20>
0x800100: 0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa  0xaaaa
(gdb)
43          sts ps2+1, r24
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc8   200
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170

```

```

SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x118    280
---Type <return> to continue, or q <return> to quit---
pc        0x118    0x118 <start+24>
0x800100: 0xaaaa   0xaaaa   0xaaaa   0xaaaa   0xaaaa   0xaaaa   0xaaaa
(gdb)
44      sts ps3+1, r24
r0      0xaa     170
r1      0xaa     170
r2      0xaa     170
r3      0xaa     170
r4      0xaa     170
r5      0xaa     170
r6      0xaa     170
r7      0xaa     170
r8      0xaa     170
r9      0xaa     170
r10     0xaa     170
r11     0xaa     170
r12     0xaa     170
r13     0xaa     170
r14     0xaa     170
r15     0xaa     170
r16     0xc8     200
r17     0x7b     123
r18     0x2      2
r19     0x20     32
r20     0x15     21
r21     0x6f     111
r22     0x61     97
r23     0xff     255
r24     0x0      0
r25     0x1      1
r26     0xaa     170
r27     0xaa     170
r28     0xaa     170
r29     0xaa     170
r30     0xaa     170
r31     0xaa     170
SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x11c    284
---Type <return> to continue, or q <return> to quit---
pc        0x11c    0x11c <start+28>
0x800100: 0xaaaa   0x00aa   0xaaaa   0xaaaa   0xaaaa   0xaaaa   0xaaaa
(gdb)
45      sts ps4+1, r24
r0      0xaa     170
r1      0xaa     170
r2      0xaa     170
r3      0xaa     170
r4      0xaa     170
r5      0xaa     170
r6      0xaa     170
r7      0xaa     170
r8      0xaa     170
r9      0xaa     170
r10     0xaa     170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc8   200
r17          0x7b   123
r18          0x2    2
r19          0x20   32
r20          0x15   21
r21          0x6f   111
r22          0x61   97
r23          0xff   255
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x120  288
---Type <return> to continue, or q <return> to quit---
pc          0x120  0x120 <start+32>
0x800100: 0xaaaa  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa  0xaaaa
(gdb)      add r16, r17
48          0xaa   170
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc8   200
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0   0x0 <reset_vector>
PC2          0x124  292
---Type <return> to continue, or q <return> to quit---
pc          0x124  0x124 <start+36>
0x800100: 0xaaaa  0x00aa  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa
(gdb)      brcc sk1 ;skips if no carry
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x21   33
SP           0x0   0x0 <reset_vector>
PC2          0x126  294
---Type <return> to continue, or q <return> to quit---
pc          0x126  0x126 <start+38>
0x800100: 0xaaaa  0x00aa  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa
(gdb)      sts ps1+1, r25 ;assigns carry bit to next byte
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x21   33
SP          0x0    0x0 <reset_vector>
PC2         0x128  296
---Type <return> to continue, or q <return> to quit---
pc          0x128  0x128 <start+40>
0x800100: 0xaaaa  0x00aa  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa
(gdb)
sk1 () at lab2-4.asm:52
52          sts ps1, r16
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x21   33
SP           0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x12c  300
pc           0x12c  0x12c <sk1>
0x800100: 0xaaaa 0x01aa  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa
(gdb)      add r18, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x2    2
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x21   33
SP           0x0    0x0 <reset_vector>
PC2          0x130  304
---Type <return> to continue, or q <return> to quit---
pc           0x130  0x130 <sk1+4>
0x800100: 0xaaaa 0x0143  0x00aa  0x00aa  0xaaaa  0xaaaa  0xaaaa
(gdb)      brcc sk2
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x132  306
---Type <return> to continue, or q <return> to quit---
pc          0x132  0x132 <sk1+6>
0x800100: 0xaaaa 0x0143  0x00aa    0x00aa    0xaaaaa  0xaaaaa  0xaaaaa
(gdb) sk2 () at lab2-4.asm:58
58          sts ps2, r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34
r19         0x20   32
r20         0x15   21
r21         0x6f   111
r22         0x61   97
r23         0xff   255

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x138    312
pc           0x138    0x138 <sk2>
0x800100: 0xaaaa 0x0143 0x00aa 0x00aa 0xaaaa 0xaaaa 0xaaaa
(gdb)
60          add r20, r21
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x43     67
r17         0x7b     123
r18         0x22     34
r19         0x20     32
r20         0x15     21
r21         0x6f     111
r22         0x61     97
r23         0xff     255
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x13c    316
---Type <return> to continue, or q <return> to quit---
pc           0x13c    0x13c <sk2+4>
0x800100: 0xaaaa 0x0143 0x0022 0x00aa 0x00aa 0xaaaa 0xaaaa 0xaaaa
(gdb)
61          brcc sk3
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34
r19         0x20   32
r20         0x84   132
r21         0x6f   111
r22         0x61   97
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x2c   44
SP          0x0    0x0 <reset_vector>
PC2         0x13e  318
---Type <return> to continue, or q <return> to quit---
pc          0x13e  0x13e <sk2+6>
0x800100: 0xaaaa 0x0143  0x0022    0x00aa    0x00aa  0xaaaa  0xaaaa
(gdb)
sk3 () at lab2-4.asm:64
64      sts ps3, r20
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x43   67
r17     0x7b   123
r18     0x22   34
r19     0x20   32
r20     0x84   132

```

```

r21          0x6f    111
r22          0x61    97
r23          0xff    255
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x2c    44
SP           0x0     0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x144   324
pc           0x144   0x144 <sk3>
0x800100: 0xaaaa 0x0143    0x0022    0x00aa    0xaaaa   0xaaaa   0xaaaa
(gdb)
66          add r22, r23
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43    67
r17         0x7b    123
r18         0x22    34
r19         0x20    32
r20         0x84    132
r21         0x6f    111
r22         0x61    97
r23         0xff    255
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x2c    44
SP           0x0     0x0 <reset_vector>
PC2          0x148   328
---Type <return> to continue, or q <return> to quit---
pc           0x148   0x148 <sk3+4>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x00aa    0xaaaa   0xaaaa
(gdb)
67          brcc sk4

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34
r19         0x20   32
r20         0x84   132
r21         0x6f   111
r22         0x60   96
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x21   33
SP          0x0    0x0 <reset_vector>
PC2         0x14a  330
---Type <return> to continue, or q <return> to quit---
pc          0x14a  0x14a <sk3+6>
0x800100: 0xaaaa 0x0143      0x0022      0x0084      0x00aa      0xaaaa      0xaaaa      0xaaaa
(gdb)       sts ps4+1, r25
68          r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34

```

```

r19          0x20    32
r20          0x84    132
r21          0x6f    111
r22          0x60    96
r23          0xff    255
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x21    33
SP           0x0     0x0 <reset_vector>
PC2          0x14c   332
---Type <return> to continue, or q <return> to quit---
pc           0x14c   0x14c <sk3+8>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x00aa    0xaaaa    0xaaaa    0xaaaa
(gdb)
sk4 () at lab2-4.asm:70
70          sts ps4, r22
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43    67
r17         0x7b    123
r18         0x22    34
r19         0x20    32
r20         0x84    132
r21         0x6f    111
r22         0x60    96
r23         0xff    255
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x21    33
SP           0x0     0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x150   336
pc           0x150   0x150 <sk4>

```

```

0x800100: 0xaaaa 0x0143      0x0022      0x0084      0x01aa      0xaaaa      0xaaaa      0xaaaa
(gdb)      lds r16, ps1
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x7b   123
r18         0x22   34
r19         0x20   32
r20         0x84   132
r21         0x6f   111
r22         0x60   96
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x21   33
SP          0x0    0x0 <reset_vector>
PC2         0x154  340
---Type <return> to continue, or q <return> to quit---
pc          0x154  0x154 <sk4+4>
0x800100: 0xaaaa 0x0143      0x0022      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)      lds r17, ps1+1
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170

```

```

r16          0x43    67
r17          0x7b    123
r18          0x22    34
r19          0x20    32
r20          0x84    132
r21          0x6f    111
r22          0x60    96
r23          0xff    255
r24          0x0     0
r25          0x1     1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x21    33
SP           0x0     0x0 <reset_vector>
PC2          0x158   344
---Type <return> to continue, or q <return> to quit---
pc          0x158   0x158 <sk4+8>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x0160    0xaaaaa   0xaaaaa   0xaaaaa
(gdb) 75      lds r18, ps2
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x43    67
r17         0x1     1
r18         0x22   34
r19         0x20   32
r20         0x84   132
r21         0x6f   111
r22         0x60   96
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x21   33
SP           0x0     0x0 <reset_vector>
PC2          0x15c   348

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x15c  0x15c <sk4+12>
0x800100: 0xaaaa  0x0143    0x0022    0x0084    0x0160    0xaaaa    0xaaaa    0xaaaa
(gdb)      lds r19, ps2+1
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x1    1
r18         0x22   34
r19         0x20   32
r20         0x84   132
r21         0x6f   111
r22         0x60   96
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x21   33
SP          0x0    0x0 <reset_vector>
PC2         0x160  352
---Type <return> to continue, or q <return> to quit---
pc          0x160  0x160 <sk4+16>
0x800100: 0xaaaa  0x0143    0x0022    0x0084    0x0160    0xaaaa    0xaaaa    0xaaaa
(gdb)      lds r20, ps3
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x43   67
r17          0x1    1
r18          0x22   34
r19          0x0    0
r20          0x84   132
r21          0x6f   111
r22          0x60   96
r23          0xff   255
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x21   33
SP           0x0    0x0 <reset_vector>
PC2          0x164  356
---Type <return> to continue, or q <return> to quit---
pc          0x164  0x164 <sk4+20>
0x800100: 0xaaaa 0x0143      0x0022      0x0084      0x0160      0xaaaaa     0xaaaaa     0xaaaaa
(gdb)      lds r21, ps3+1
78          0xaa   170
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0x84   132
r21         0x6f   111
r22         0x60   96
r23         0xff   255
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x21   33

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x168    360
---Type <return> to continue, or q <return> to quit---
pc          0x168    0x168 <sk4+24>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x0160    0xaaaa    0xaaaa    0xaaaa
(gdb)
79          lds r22, ps4
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x43     67
r17         0x1      1
r18         0x22     34
r19         0x0      0
r20         0x84     132
r21         0x0      0
r22         0x60     96
r23         0xff     255
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x21     33
SP          0x0      0x0 <reset_vector>
PC2         0x16c    364
---Type <return> to continue, or q <return> to quit---
pc          0x16c    0x16c <sk4+28>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x0160    0xaaaa    0xaaaa    0xaaaa
(gdb)
80          lds r23, ps4+1
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x43   67
r17          0x1    1
r18          0x22   34
r19          0x0    0
r20          0x84   132
r21          0x0    0
r22          0x60   96
r23          0xff   255
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x21   33
SP           0x0    0x0 <reset_vector>
PC2          0x170  368
---Type <return> to continue, or q <return> to quit---
pc          0x170  0x170 <sk4+32>
0x800100: 0xaaaa 0x0143  0x0022      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)      add r16, r18
82
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x43   67
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0x84   132
r21         0x0    0
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x21   33
SP           0x0    0x0 <reset_vector>
PC2          0x174  372
---Type <return> to continue, or q <return> to quit---
pc           0x174  0x174 <sk4+36>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x0160    0xaaaa   0xaaaa   0xaaaa
(gdb)
83          adc r17, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0x84   132
r21         0x0    0
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x176  374
---Type <return> to continue, or q <return> to quit---
pc           0x176  0x176 <sk4+38>
0x800100: 0xaaaa 0x0143    0x0022    0x0084    0x0160    0xaaaa   0xaaaa   0xaaaa
(gdb)
84          sts ps1, r16
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x65   101
r17          0x1    1
r18          0x22   34
r19          0x0    0
r20          0x84   132
r21          0x0    0
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x178  376
---Type <return> to continue, or q <return> to quit---
pc           0x178  0x178 <sk4+40>
0x800100: 0xaaaa 0x0143  0x0022      0x0084      0x0160      0xaaaaa    0xaaaaa    0xaaaaa
(gdb)      sts ps1+1, r17
85          r0      0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0x84   132
r21         0x0    0
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x17c  380
---Type <return> to continue, or q <return> to quit---
pc           0x17c  0x17c <sk4+44>
0x800100: 0xaaaa 0x0165  0x0022    0x0084    0x0160    0xaaaaa   0xaaaaa   0xaaaaa
(gdb)
87          add r20, r22
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0x84   132
r21         0x0    0
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x180   384
---Type <return> to continue, or q <return> to quit---
pc           0x180   0x180 <sk4+48>
0x800100: 0xaaaa 0x0165  0x0022    0x0084    0x0160    0xaaaaa   0xaaaaa   0xaaaaa
(gdb)
88          adc r21, r23
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0xe4   228
r21         0x0    0
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x182  386
---Type <return> to continue, or q <return> to quit---
pc          0x182  0x182 <sk4+50>
0x800100: 0xaaaa 0x0165  0x0022  0x0084  0x0160  0xaaaa  0xaaaa  0xaaaa
(gdb)
89          sts ps2, r20
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x184  388
---Type <return> to continue, or q <return> to quit---
pc          0x184  0x184 <sk4+52>
0x800100: 0xaaaa 0x0165      0x0022      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)
90          sts ps2+1, r21
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x188  392
---Type <return> to continue, or q <return> to quit---
pc          0x188  0x188 <sk4+56>
0x800100: 0xaaaa 0x0165      0x00e4      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)
93          lds r16, ps1
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x18c   396
---Type <return> to continue, or q <return> to quit---
pc          0x18c   0x18c <sk4+60>
0x800100: 0xaaaa 0x0165   0x01e4     0x0084     0x0160     0xaaaaa   0xaaaaa   0xaaaaa
(gdb)      lds r17, ps1+1
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0x22   34
r19         0x0    0
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x190    400
---Type <return> to continue, or q <return> to quit---
pc           0x190    0x190 <sk4+64>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0xaaaaa   0xaaaaa   0xaaaaa
(gdb)
95          lds r18, ps2
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x65     101
r17         0x1      1
r18         0x22    34
r19         0x0      0
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x194    404
---Type <return> to continue, or q <return> to quit---
pc           0x194    0x194 <sk4+68>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0xaaaaa   0xaaaaa   0xaaaaa
(gdb)
96          lds r19, ps2+1
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0xe4   228
r19         0x0    0
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x198  408
---Type <return> to continue, or q <return> to quit---
pc          0x198  0x198 <sk4+72>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0xaaaa  0xaaaa  0xaaaa
(gdb) 98      add r16, r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x65   101
r17         0x1    1
r18         0xe4   228
r19         0x1    1
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x19c    412
---Type <return> to continue, or q <return> to quit---
pc          0x19c    0x19c <sk4+76>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)
99          adc r17, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x49     73
r17         0x1      1
r18         0xe4     228
r19         0x1      1
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x1      1
SP           0x0      0x0 <reset_vector>
PC2          0x19e    414
---Type <return> to continue, or q <return> to quit---
pc          0x19e    0x19e <sk4+78>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0xaaaa      0xaaaa      0xaaaa
(gdb)
100         sts sum, r16
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x3    3
r18         0xe4   228
r19         0x1    1
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1a0  416
---Type <return> to continue, or q <return> to quit---
pc          0x1a0  0x1a0 <sk4+80>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0xaaaaa    0xaaaaa    0xaaaaa
(gdb)
101        sts sum+1, r17
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x3    3
r18         0xe4   228
r19         0x1    1
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1a4    420
---Type <return> to continue, or q <return> to quit---
pc          0x1a4    0x1a4 <sk4+84>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0xaa49      0xaaaa      0xaaaa
(gdb) 107      lds r16, sum
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x49     73
r17         0x3      3
r18         0xe4     228
r19         0x1      1
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1a8    424
---Type <return> to continue, or q <return> to quit---
pc          0x1a8    0x1a8 <sk4+88>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 108      lds r17, sum+1

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x3    3
r18         0xe4   228
r19         0x1    1
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ac  428
---Type <return> to continue, or q <return> to quit---
pc          0x1ac  0x1ac <sk4+92>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 109 ldi r18, 0 ;counter
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x3    3
r18         0xe4   228

```

```

r19          0x1      1
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b0    432
---Type <return> to continue, or q <return> to quit---
pc          0x1b0    0x1b0 <sk4+96>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 110 ldi r19, 8 ;denominator
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x49    73
r17         0x3     3
r18         0x0     0
r19         0x1     1
r20         0xe4    228
r21         0x1     1
r22         0x60    96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0     0
SP           0x0      0x0 <reset_vector>
PC2          0x1b2    434
---Type <return> to continue, or q <return> to quit---
pc          0x1b2    0x1b2 <sk4+98>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb)
divloop () at lab2-4.asm:113
113      sub r16, r19
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x49   73
r17      0x3    3
r18      0x0    0
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x0    0
SP      0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2     0x1b4   436
pc      0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114      brlw borrower
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
```

```

r16          0x41    65
r17          0x3      3
r18          0x0      0
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x41    65
r17         0x3      3
r18         0x0      0
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x41     65
r17         0x3      3
r18         0x1      1
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x41   65
r17          0x3    3
r18          0x1    1
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x3    3
r18         0x1    1
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115        inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x39     57
r17         0x3      3
r18         0x1      1
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x39   57
r17          0x3     3
r18          0x2     2
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x3     3
r18         0x2     2
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x20   32
SP          0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x3    3
r18         0x2    2
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x31   49
r17          0x3     3
r18          0x2     2
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
116          r0       0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x31   49
r17          0x3     3
r18          0x3     3
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x31   49
r17          0x3    3
r18          0x3    3
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114          brlo borrower
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x3    3
r18         0x3    3
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115 inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x3    3
r18         0x3    3
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x3    3
r18         0x4    4
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x3    3
r18         0x4    4
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) brlo borrower
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x3    3
r18         0x4    4
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x21     33
r17          0x3      3
r18          0x4      4
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x3    3
r18         0x5    5
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x3    3
r18         0x5    5
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x19     25
r17         0x3      3
r18         0x5      5
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) i nc r18
115          inc r18
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x3    3
r18         0x5    5
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x3    3
r18         0x6    6
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 113      sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x19     25
r17          0x3      3
r18          0x6      6
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 114      b1lo borrower

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x3    3
r18         0x6    6
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x3    3
r18         0x6    6

```

```

r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0x11    17
r17          0x3     3
r18          0x7     7
r19          0x8     8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb)      sub r16, r19
113      0xaa   170
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x11   17
r17      0x3    3
r18      0x7    7
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG     0x0    0
SP       0x0    0x0 <reset_vector>
PC2      0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc      0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      brlo borrower
114      0xaa   170
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x9    9
```

```

r17          0x3      3
r18          0x7      7
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa  0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaaa   0xaaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x9      9
r17          0x3      3
r18          0x7      7
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x9      9
r17         0x3      3
r18         0x8      8
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170

```

```

r15          0xaa   170
r16          0x9    9
r17          0x3    3
r18          0x8    8
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x3    3
r18         0x8    8
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x1      1
r17         0x3      3
r18         0x8      8
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x1    1
r17          0x3    3
r18          0x9    9
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa  0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x1    1
r17          0x3    3
r18          0x9    9
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170

```

```

SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc        0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114      r0        0xaa    170
r1        0xaa    170
r2        0xaa    170
r3        0xaa    170
r4        0xaa    170
r5        0xaa    170
r6        0xaa    170
r7        0xaa    170
r8        0xaa    170
r9        0xaa    170
r10      0xaa    170
r11      0xaa    170
r12      0xaa    170
r13      0xaa    170
r14      0xaa    170
r15      0xaa    170
r16      0xf9    249
r17      0x3     3
r18      0x9     9
r19      0x8     8
r20      0xe4    228
r21      0x1     1
r22      0x60    96
r23      0x1     1
r24      0x0     0
r25      0x1     1
r26      0xaa    170
r27      0xaa    170
r28      0xaa    170
r29      0xaa    170
r30      0xaa    170
r31      0xaa    170
SREG      0x35    53
SP        0x0      0x0 <reset_vector>
PC2       0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc        0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      borrower () at lab2-4.asm:119
119      sub r17, r25 ;cannot use dec due to flag behaviour
r0        0xaa    170
r1        0xaa    170
r2        0xaa    170
r3        0xaa    170
r4        0xaa    170
r5        0xaa    170
r6        0xaa    170
r7        0xaa    170
r8        0xaa    170
r9        0xaa    170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xf9   249
r17          0x3    3
r18          0x9    9
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x35   53
SP           0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1bc  444
pc           0x1bc  0x1bc <borrower>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo infloop
120          b rlo infloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x2    2
r18         0x9    9
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1be  446
---Type <return> to continue, or q <return> to quit---
pc           0x1be  0x1be <borrower+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
121          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xf9   249
r17          0x2    2
r18          0x9    9
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1c0  448
---Type <return> to continue, or q <return> to quit---
pc           0x1c0  0x1c0 <borrower+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
122          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x2    2
r18         0xa    10
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1c2  450
---Type <return> to continue, or q <return> to quit---
pc          0x1c2  0x1c2 <borrower+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
divloop () at lab2-4.asm:113
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x2    2
r18         0xa    10
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1b4   436
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x2    2
r18         0xa    10
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165   0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x2    2
r18         0xa    10
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
116        rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x2    2
r18         0xb    11
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113         sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xf1     241
r17          0x2      2
r18          0xb      11
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x2    2
r18         0xb    11
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x2    2
r18         0xb    11
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34    52
SP           0x0     <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x2    2
r18         0xc    12
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20    32
SP           0x0     <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) sub r16, r19
r0          0xaa   170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x2    2
r18         0xc    12
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114       b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe1   225
r17         0x2    2
r18         0xc    12
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14    20
SP           0x0     <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe1   225
r17         0x2    2
r18         0xc    12
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14    20
SP           0x0     <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

116      rjmp divloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xe1   225
r17      0x2    2
r18      0xd    13
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x0    0
SP       0x0    0x0 <reset_vector>
PC2     0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc      0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xe1   225
r17      0x2    2

```

```

r18          0xd      13
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) brlo borrower
114
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd9     217
r17         0x2      2
r18         0xd      13
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x34     52
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xd9   217
r17     0x2    2
r18     0xd    13
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x34   52
SP      0x0    0x0 <reset_vector>
PC2     0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc      0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 116      rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0xd9    217
r17          0x2     2
r18          0xe     14
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20    32
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd9    217
r17         0x2     2
r18         0xe     14
r19         0x8     8
r20         0xe4    228
r21         0x1     1
r22         0x60    96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20    32
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd1     209
r17         0x2      2
r18         0xe      14
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x14     20
SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0xd1   209
r17          0x2    2
r18          0xe    14
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaaa   0xaaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd1   209
r17         0x2    2
r18         0xf    15
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd1     209
r17         0x2      2
r18         0xf      15
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc9   201
r17          0x2    2
r18          0xf    15
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x2    2
r18         0xf    15
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x34   52
SP          0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x2    2
r18         0x10   16
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

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```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc9   201
r17          0x2    2
r18          0x10   16
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x2    2
r18         0x10   16
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc1   193
r17          0x2    2
r18          0x10   16
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
116          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x2    2
r18         0x11   17
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x2    2
r18         0x11   17
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b r18
114          brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x2    2
r18         0x11   17
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) i r18
115          inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x2    2
r18         0x11   17
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x2    2
r18         0x12   18
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xb9     185
r17         0x2      2
r18         0x12    18
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x2    2
r18         0x12   18
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x2    2
r18         0x12   18
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x14     20
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xb1     177
r17         0x2      2
r18         0x13     19
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) sub r16, r19
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x2    2
r18         0x13   19
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x2    2
r18         0x13   19
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x34     52
SP           0x0      <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xa9     169
r17         0x2      2
r18         0x13     19
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x34     52
SP           0x0      <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 116      rjmp divloop

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x2    2
r18         0x14   20
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x2    2
r18         0x14   20

```

```

r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114        brlo borrower
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0xa1    161
r17         0x2      2
r18         0x14    20
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x14    20
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa

```

```
(gdb)      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
r17         0x2    2
r18         0x14   20
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0xb8   440
---Type <return> to continue, or q <return> to quit---
pc          0xb8   0xb8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
```

```

r17          0x2      2
r18          0x15     21
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaaa   0xaaaaa
(gdb)
113          sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xa1     161
r17          0x2      2
r18          0x15     21
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114      brlo borrower
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170
r15       0xaa     170
r16       0x99     153
r17       0x2      2
r18       0x15     21
r19       0x8      8
r20       0xe4     228
r21       0x1      1
r22       0x60     96
r23       0x1      1
r24       0x0      0
r25       0x1      1
r26       0xaa     170
r27       0xaa     170
r28       0xaa     170
r29       0xaa     170
r30       0xaa     170
r31       0xaa     170
SREG      0x34     52
SP        0x0      0x0 <reset_vector>
PC2       0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170

```

```

r15          0xaa   170
r16          0x99   153
r17          0x2    2
r18          0x15   21
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      rjmp divloop
116
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x99   153
r17         0x2    2
r18         0x16   22
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa    0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x99     153
r17         0x2      2
r18         0x16    22
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20    32
SP          0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa    0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114         b1lo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x91   145
r17          0x2    2
r18          0x16   22
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x91   145
r17          0x2    2
r18          0x16   22
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170

```

```

SREG      0x14    20
SP        0x0     0x0 <reset_vector>
PC2       0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc        0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170
r11      0xaa    170
r12      0xaa    170
r13      0xaa    170
r14      0xaa    170
r15      0xaa    170
r16      0x91    145
r17      0x2     2
r18      0x17    23
r19      0x8     8
r20      0xe4    228
r21      0x1     1
r22      0x60    96
r23      0x1     1
r24      0x0     0
r25      0x1     1
r26      0xaa    170
r27      0xaa    170
r28      0xaa    170
r29      0xaa    170
r30      0xaa    170
r31      0xaa    170
SREG      0x0     0
SP        0x0     0x0 <reset_vector>
PC2       0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc        0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x91   145
r17          0x2    2
r18          0x17   23
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x2    2
r18         0x17   23
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      inc r18
115          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x89   137
r17          0x2    2
r18          0x17   23
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      rjmp divloop
116          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x2    2
r18         0x18   24
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x2    2
r18         0x18   24
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
114          brlo borrower
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x81   129
r17          0x2    2
r18          0x18   24
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x2    2
r18         0x18   24
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x2    2
r18         0x19   25
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x2    2
r18         0x19   25
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114         b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x2    2
r18         0x19   25
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x38   56
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x2    2
r18         0x19   25
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x38     56
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x79     121
r17          0x2      2
r18          0x1a     26
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x2    2
r18         0x1a   26
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x2    2
r18         0x1a   26
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x71   113
r17          0x2    2
r18          0x1a   26
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      rjmp divloop
r0           0xaa   170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x2    2
r18         0x1b   27
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x2    2
r18         0x1b   27
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x69   105
r17         0x2    2
r18         0x1b   27
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

115      inc r18
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x69   105
r17      0x2    2
r18      0x1b   27
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x20   32
SP      0x0   <reset_vector>
PC2     0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc      0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x69   105
r17      0x2    2

```

```

r18          0x1c    28
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
113         sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x69   105
r17          0x2     2
r18          0x1c   28
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) brlo borrower
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x61   97
r17     0x2    2
r18     0x1c   28
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x0    0
SP      0x0    0x0 <reset_vector>
PC2     0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc      0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0x61    97
r17          0x2      2
r18          0x1c    28
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x61    97
r17         0x2      2
r18         0x1d    29
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x61     97
r17         0x2      2
r18         0x1d     29
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x59   89
r17          0x2    2
r18          0x1d   29
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x59   89
r17          0x2    2
r18          0x1d   29
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x59     89
r17         0x2      2
r18         0x1e     30
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x59   89
r17          0x2    2
r18          0x1e   30
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x2    2
r18         0x1e   30
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
```

```

r31          0xaa   170
SREG         0x0    0
SP          0x0   0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115      r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x2    2
r18         0x1e   30
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0   0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
116      r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x51   81
r17          0x2    2
r18          0x1f   31
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x2    2
r18         0x1f   31
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x2    2
r18         0x1f   31
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x2    2
r18         0x1f   31
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) rjmp divloop
116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x2    2
r18         0x20   32
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x2    2
r18         0x20   32
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114          brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x2    2
r18         0x20   32
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x2    2
r18         0x20   32
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x41     65
r17          0x2      2
r18          0x21    33
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x2    2
r18         0x21   33
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb) b rlo borrower
114      b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x2    2
r18         0x21   33
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x39     57
r17         0x2      2
r18         0x21    33
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x2    2
r18         0x22   34
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x2    2
r18         0x22   34
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x31     49
r17          0x2      2
r18          0x22    34
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) inc r18
115          inc r18

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x2    2
r18         0x22   34
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 116 rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x2    2
r18         0x23   35

```

```

r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x31    49
r17         0x2     2
r18         0x23   35
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa

```

```
(gdb) brlo borrower
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x29   41
r17     0x2    2
r18     0x23   35
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG   0x20   32
SP     0x0    0x0 <reset_vector>
PC2    0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc    0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165   0x01e4       0x0084       0x0160       0x0349       0xaaaa       0xaaaa
(gdb) 115      inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x29   41
```

```

r17          0x2      2
r18          0x23     35
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x29     41
r17          0x2      2
r18          0x24     36
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x29     41
r17         0x2      2
r18         0x24     36
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114         brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170

```

```

r15          0xaa   170
r16          0x21   33
r17          0x2    2
r18          0x24   36
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165   0x01e4     0x0084     0x0160     0x0349     0xaaaa     0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x2    2
r18         0x24   36
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x21     33
r17         0x2      2
r18         0x25     37
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x21   33
r17          0x2    2
r18          0x25   37
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114          b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x2    2
r18         0x25   37
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170

```

```

SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc        0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170
r11      0xaa    170
r12      0xaa    170
r13      0xaa    170
r14      0xaa    170
r15      0xaa    170
r16      0x19    25
r17      0x2     2
r18      0x25    37
r19      0x8     8
r20      0xe4    228
r21      0x1     1
r22      0x60    96
r23      0x1     1
r24      0x0     0
r25      0x1     1
r26      0xaa    170
r27      0xaa    170
r28      0xaa    170
r29      0xaa    170
r30      0xaa    170
r31      0xaa    170
SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc        0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x19   25
r17          0x2    2
r18          0x26   38
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x2    2
r18         0x26   38
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x2    2
r18         0x26   38
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x2    2
r18         0x26   38
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x2    2
r18         0x27   39
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
113          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x11   17
r17          0x2    2
r18          0x27   39
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      brlo borrower
114          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x2    2
r18         0x27   39
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      inc r18
115          0xaa   170
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x2    2
r18         0x27   39
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x9    9
r17          0x2    2
r18          0x28   40
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x2    2
r18         0x28   40
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x2    2
r18         0x28   40
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x1      1
r17          0x2      2
r18          0x28     40
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x2    2
r18         0x29   41
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x2    2
r18         0x29   41
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xf9   249
r17          0x2    2
r18          0x29   41
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x35   53
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
borrower () at lab2-4.asm:119
119          sub r17, r25 ;cannot use dec due to flag behaviour

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x2    2
r18         0x29   41
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x35   53
SP          0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2         0x1bc  444
pc          0x1bc  0x1bc <borrower>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo infloop
120
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x1    1
r18         0x29   41

```

```

r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1be   446
---Type <return> to continue, or q <return> to quit---
pc          0x1be   0x1be <borrower+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
121          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xf9   249
r17          0x1     1
r18          0x29   41
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1c0   448
---Type <return> to continue, or q <return> to quit---
pc          0x1c0   0x1c0 <borrower+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb) rjmp divloop
r0      0xaa    170
r1      0xaa    170
r2      0xaa    170
r3      0xaa    170
r4      0xaa    170
r5      0xaa    170
r6      0xaa    170
r7      0xaa    170
r8      0xaa    170
r9      0xaa    170
r10     0xaa    170
r11     0xaa    170
r12     0xaa    170
r13     0xaa    170
r14     0xaa    170
r15     0xaa    170
r16     0xf9    249
r17     0x1     1
r18     0x2a   42
r19     0x8     8
r20     0xe4   228
r21     0x1     1
r22     0x60   96
r23     0x1     1
r24     0x0     0
r25     0x1     1
r26     0xaa    170
r27     0xaa    170
r28     0xaa    170
r29     0xaa    170
r30     0xaa    170
r31     0xaa    170
SREG   0x0     0
SP      0x0     0x0 <reset_vector>
PC2    0x1c2   450
---Type <return> to continue, or q <return> to quit---
pc      0x1c2   0x1c2 <borrower+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
divloop () at lab2-4.asm:113
113    sub r16, r19
r0      0xaa    170
r1      0xaa    170
r2      0xaa    170
r3      0xaa    170
r4      0xaa    170
r5      0xaa    170
r6      0xaa    170
r7      0xaa    170
r8      0xaa    170
r9      0xaa    170
r10     0xaa    170
r11     0xaa    170
r12     0xaa    170
r13     0xaa    170
r14     0xaa    170
r15     0xaa    170
```

```

r16          0xf9    249
r17          0x1     1
r18          0x2a    42
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1b4   436
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x1     1
r18         0x2a   42
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14   20
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xf1     241
r17         0x1      1
r18         0x2a     42
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x14     20
SP          0x0      0x0 <reset_vector>
PC2         0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0xf1   241
r17          0x1    1
r18          0x2b   43
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x1    1
r18         0x2b   43
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xe9     233
r17         0x1      1
r18         0x2b     43
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x34     52
SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xe9   233
r17          0x1    1
r18          0x2b   43
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
116
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x1    1
r18         0x2c   44
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x20   32
SP          0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x1    1
r18         0x2c   44
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2          0xb4   436
---Type <return> to continue, or q <return> to quit---
pc          0xb4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114          brlw borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xe1   225
r17          0x1    1
r18          0x2c   44
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xe1   225
r17          0x1    1
r18          0x2c   44
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xe1   225
r17          0x1    1
r18          0x2d   45
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe1   225
r17         0x1    1
r18         0x2d   45
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) brlo borrower
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd9   217
r17         0x1    1
r18         0x2d   45
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd9   217
r17         0x1    1
r18         0x2d   45
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd9   217
r17         0x1    1
r18         0x2e   46
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaaa  0xaaaaaa
(gdb)
113        sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd9   217
r17         0x1    1
r18         0x2e   46
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114          brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd1    209
r17         0x1      1
r18         0x2e    46
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x14    20
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
115          inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd1   209
r17         0x1    1
r18         0x2e   46
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd1   209
r17         0x1    1
r18         0x2f   47
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd1     209
r17         0x1      1
r18         0x2f     47
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x1    1
r18         0x2f   47
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115         inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x1    1
r18         0x2f   47
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x34     52
SP           0x0      <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 116      rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xc9     201
r17          0x1      1
r18          0x30     48
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 113      sub r16, r19

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x1    1
r18         0x30   48
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x1    1
r18         0x30   48

```

```

r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x14     20
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115 inc r18
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0xc1    193
r17         0x1      1
r18         0x30    48
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x14     20
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb) rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xc1   193
r17     0x1    1
r18     0x31   49
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG   0x0    0
SP      0x0    0x0 <reset_vector>
PC2    0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc      0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 113      sub r16, r19
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xc1   193
```

```

r17          0x1      1
r18          0x31     49
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0xb9    185
r17          0x1      1
r18          0x31     49
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x34     52
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0       0xaa     170
r1       0xaa     170
r2       0xaa     170
r3       0xaa     170
r4       0xaa     170
r5       0xaa     170
r6       0xaa     170
r7       0xaa     170
r8       0xaa     170
r9       0xaa     170
r10      0xaa     170
r11      0xaa     170
r12      0xaa     170
r13      0xaa     170
r14      0xaa     170
r15      0xaa     170
r16      0xb9     185
r17      0x1      1
r18      0x31    49
r19      0x8      8
r20      0xe4    228
r21      0x1      1
r22      0x60    96
r23      0x1      1
r24      0x0      0
r25      0x1      1
r26      0xaa     170
r27      0xaa     170
r28      0xaa     170
r29      0xaa     170
r30      0xaa     170
r31      0xaa     170
SREG    0x34    52
SP      0x0      0x0 <reset_vector>
PC2     0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa     170
r1       0xaa     170
r2       0xaa     170
r3       0xaa     170
r4       0xaa     170
r5       0xaa     170
r6       0xaa     170
r7       0xaa     170
r8       0xaa     170
r9       0xaa     170
r10      0xaa     170
r11      0xaa     170
r12      0xaa     170
r13      0xaa     170
r14      0xaa     170

```

```

r15          0xaa   170
r16          0xb9   185
r17          0x1    1
r18          0x32   50
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x1    1
r18         0x32   50
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xb1     177
r17         0x1      1
r18         0x32     50
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x14     20
SP          0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
115
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xb1   177
r17          0x1    1
r18          0x32   50
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa  0x0165   0x01e4     0x0084     0x0160     0x0349     0xaaaa     0xaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x1    1
r18         0x33   51
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170

```

```

SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc        0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa     170
r1       0xaa     170
r2       0xaa     170
r3       0xaa     170
r4       0xaa     170
r5       0xaa     170
r6       0xaa     170
r7       0xaa     170
r8       0xaa     170
r9       0xaa     170
r10      0xaa     170
r11      0xaa     170
r12      0xaa     170
r13      0xaa     170
r14      0xaa     170
r15      0xaa     170
r16      0xb1     177
r17      0x1      1
r18      0x33    51
r19      0x8      8
r20      0xe4    228
r21      0x1      1
r22      0x60    96
r23      0x1      1
r24      0x0      0
r25      0x1      1
r26      0xaa     170
r27      0xaa     170
r28      0xaa     170
r29      0xaa     170
r30      0xaa     170
r31      0xaa     170
SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc        0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      brlw borrower
r0       0xaa     170
r1       0xaa     170
r2       0xaa     170
r3       0xaa     170
r4       0xaa     170
r5       0xaa     170
r6       0xaa     170
r7       0xaa     170
r8       0xaa     170
r9       0xaa     170
r10      0xaa     170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xa9   169
r17          0x1    1
r18          0x33   51
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x1    1
r18         0x33   51
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x1    1
r18         0x34  52
r19         0x8    8
r20         0xe4  228
r21         0x1    1
r22         0x60  96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x1    1
r18         0x34   52
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
r17         0x1    1
r18         0x34   52
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xa1   161
r17          0x1    1
r18          0x34   52
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
r17         0x1    1
r18         0x35   53
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      sub r16, r19
113      r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
r17         0x1    1
r18         0x35   53
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x99   153
r17         0x1    1
r18         0x35   53
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
115        inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x99   153
r17         0x1    1
r18         0x35   53
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0x99   153
r16         0x1    1
r17         0x36   54
r18         0x8    8
r19         0xe4   228
r20         0x1    1
r21         0x60   96
r22         0x1    1
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113         sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x99     153
r17          0x1      1
r18          0x36    54
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x1    1
r18         0x36   54
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x1    1
r18         0x36   54
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14    20
SP           0x0     0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x1    1
r18         0x37   55
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      sub r16, r19
r0          0xaa   170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x1    1
r18         0x37   55
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114       b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x1    1
r18         0x37   55
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34    52
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x89   137
r17          0x1    1
r18          0x37   55
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34    52
SP           0x0     0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

116      rjmp divloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x89   137
r17      0x1    1
r18      0x38   56
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x20   32
SP      0x0    0x0 <reset_vector>
PC2     0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc      0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x89   137
r17      0x1    1

```

```

r18          0x38    56
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x1     1
r18         0x38    56
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14   20
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x81   129
r17     0x1    1
r18     0x38   56
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x14   20
SP      0x0    0x0 <reset_vector>
PC2     0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc      0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 116      rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0x81    129
r17          0x1      1
r18          0x39    57
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4     0x0084     0x0160     0x0349     0xaaaa     0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x81    129
r17         0x1      1
r18         0x39    57
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x79     121
r17         0x1      1
r18         0x39     57
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x38     56
SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x79   121
r17          0x1    1
r18          0x39   57
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x38   56
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaaa   0xaaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x1    1
r18         0x3a   58
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x79     121
r17         0x1      1
r18         0x3a     58
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x71   113
r17          0x1    1
r18          0x3a   58
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x1    1
r18         0x3a   58
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x0    0
SP          0x0   0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x1    1
r18         0x3b   59
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0   0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

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r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x71   113
r17          0x1    1
r18          0x3b   59
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x69   105
r17         0x1    1
r18         0x3b   59
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x69   105
r17          0x1    1
r18          0x3b   59
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
116          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x69   105
r17         0x1    1
r18         0x3c   60
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x69   105
r17         0x1    1
r18         0x3c   60
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) b r18
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x61   97
r17         0x1    1
r18         0x3c   60
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) inc r18
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x61   97
r17         0x1    1
r18         0x3c   60
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x61   97
r17         0x1    1
r18         0x3d   61
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
113          sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x61     97
r17          0x1      1
r18          0x3d     61
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
114          brlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x59   89
r17         0x1    1
r18         0x3d   61
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x59   89
r17         0x1    1
r18         0x3d   61
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x59     89
r17         0x1      1
r18         0x3e     62
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) sub r16, r19
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x59   89
r17         0x1    1
r18         0x3e   62
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114       brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x1    1
r18         0x3e   62
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x51     81
r17          0x1      1
r18          0x3e     62
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x1    1
r18         0x3f   63
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x1    1
r18         0x3f   63

```

```

r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        brlo borrower
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x49    73
r17         0x1      1
r18         0x3f    63
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb)      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x1    1
r18         0x3f   63
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165   0x01e4       0x0084       0x0160       0x0349       0xaaaaa     0xaaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
```

```

r17          0x1      1
r18          0x40     64
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0x49    73
r17          0x1      1
r18          0x40     64
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      brlo borrower
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170
r15       0xaa     170
r16       0x41     65
r17       0x1      1
r18       0x40     64
r19       0x8      8
r20       0xe4     228
r21       0x1      1
r22       0x60     96
r23       0x1      1
r24       0x0      0
r25       0x1      1
r26       0xaa     170
r27       0xaa     170
r28       0xaa     170
r29       0xaa     170
r30       0xaa     170
r31       0xaa     170
SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
115      inc r18
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170

```

```

r15          0xaa   170
r16          0x41   65
r17          0x1    1
r18          0x40   64
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x1    1
r18         0x41   65
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa    0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x41     65
r17         0x1      1
r18         0x41     65
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa    0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      b1lo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x39   57
r17          0x1    1
r18          0x41   65
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x39   57
r17          0x1    1
r18          0x41   65
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170

```

```

SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc        0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170
r11      0xaa    170
r12      0xaa    170
r13      0xaa    170
r14      0xaa    170
r15      0xaa    170
r16      0x39    57
r17      0x1     1
r18      0x42    66
r19      0x8     8
r20      0xe4    228
r21      0x1     1
r22      0x60    96
r23      0x1     1
r24      0x0     0
r25      0x1     1
r26      0xaa    170
r27      0xaa    170
r28      0xaa    170
r29      0xaa    170
r30      0xaa    170
r31      0xaa    170
SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc        0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x39   57
r17          0x1    1
r18          0x42   66
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x1    1
r18         0x42   66
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0   0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x1    1
r18         0x42   66
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0   0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      rjmp divloop
116
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x1    1
r18         0x43   67
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaaa   0xaaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x1    1
r18         0x43   67
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) brlo borrower
114          r0     0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x29   41
r17          0x1    1
r18          0x43   67
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb) inc r18
115          r0     0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x1    1
r18         0x43   67
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x1    1
r18         0x44   68
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x1    1
r18         0x44   68
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114         b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x1    1
r18         0x44   68
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x1    1
r18         0x44   68
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x21     33
r17         0x1      1
r18         0x45     69
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x1    1
r18         0x45   69
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x1    1
r18         0x45   69
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20    32
SP           0x0      <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      inc r18
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0x19    25
r17          0x1      1
r18          0x45    69
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20    32
SP           0x0      <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      rjmp divloop
r0           0xaa    170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x1    1
r18         0x46   70
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x1    1
r18         0x46   70
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20    32
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x1     1
r18         0x46   70
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

115      inc r18
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x11   17
r17      0x1    1
r18      0x46   70
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x0    0
SP      0x0    0x0 <reset_vector>
PC2     0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc      0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165   0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
116      rjmp divloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x11   17
r17      0x1    1

```

```

r18          0x47    71
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
113         sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x11   17
r17          0x1     1
r18          0x47   71
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) brlo borrower
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x9    9
r17     0x1    1
r18     0x47   71
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x20   32
SP      0x0    0x0 <reset_vector>
PC2    0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc      0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0x9      9
r17          0x1      1
r18          0x47     71
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20     32
SP           0x0      <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x9      9
r17         0x1      1
r18         0x48     72
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x20     32
SP           0x0      <reset_vector>
PC2          0x1ba    442

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x9      9
r17         0x1      1
r18         0x48     72
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x1    1
r17          0x1    1
r18          0x48   72
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
115          inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x1    1
r18         0x48   72
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x1      1
r17         0x1      1
r18         0x49    73
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x1    1
r17          0x1    1
r18          0x49   73
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x1    1
r18         0x49   73
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x35   53
SP          0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
borrower () at lab2-4.asm:119
119      sub r17, r25 ;cannot use dec due to flag behaviour
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x1    1
r18         0x49   73
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x35   53
SP          0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1bc  444
pc          0x1bc  0x1bc <borrower>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
120      b rlo infloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x0    0
r18         0x49   73
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x2    2
SP          0x0    0x0 <reset_vector>
PC2         0x1be  446
---Type <return> to continue, or q <return> to quit---
pc          0x1be  0x1be <borrower+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
121         inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x0    0
r18         0x49   73
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x2    2
SP           0x0    0x0 <reset_vector>
PC2          0x1c0  448
---Type <return> to continue, or q <return> to quit---
pc           0x1c0  0x1c0 <borrower+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
122         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x0    0
r18         0x4a   74
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1c2  450
---Type <return> to continue, or q <return> to quit---
pc           0x1c2  0x1c2 <borrower+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
divloop () at lab2-4.asm:113
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x0    0
r18         0x4a   74
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2         0x1b4   436
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) b rlo borrower
114      b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x0    0
r18         0x4a   74
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x14    20
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xf1    241
r17          0x0      0
r18          0x4a    74
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x14    20
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x0    0
r18         0x4b   75
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf1   241
r17         0x0    0
r18         0x4b   75
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo borrower
114          b rlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xe9     233
r17          0x0      0
r18          0x4b     75
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x34     52
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) i nc r18
115          inc r18
r0           0xaa     170
r1           0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x0    0
r18         0x4b   75
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe9   233
r17         0x0    0
r18         0x4c   76
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 113      sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xe9     233
r17          0x0      0
r18          0x4c     76
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 114      b1lo borrower

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe1   225
r17         0x0    0
r18         0x4c   76
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xe1   225
r17         0x0    0
r18         0x4c   76

```

```

r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x14     20
SP           0x0      <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0xe1    225
r17         0x0      0
r18         0x4d    77
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x0      0
SP           0x0      <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb)      sub r16, r19
113      0xaa   170
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xe1   225
r17      0x0    0
r18      0x4d   77
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG     0x0    0
SP       0x0    0x0 <reset_vector>
PC2      0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc      0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      brlo borrower
114      0xaa   170
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xd9   217
```

```

r17          0x0      0
r18          0x4d    77
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x34    52
SP           0x0      0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
115          inc r18
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0xd9    217
r17          0x0      0
r18          0x4d    77
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x34    52
SP           0x0      0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd9     217
r17         0x0      0
r18         0x4e     78
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170

```

```

r15          0xaa   170
r16          0xd9   217
r17          0x0    0
r18          0x4e   78
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xd1   209
r17         0x0    0
r18         0x4e   78
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xd1     209
r17         0x0      0
r18         0x4e     78
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x14     20
SP          0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xd1   209
r17          0x0    0
r18          0x4f   79
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xd1   209
r17          0x0    0
r18          0x4f   79
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170

```

```

SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc        0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170
r15       0xaa     170
r16       0xc9     201
r17       0x0      0
r18       0x4f     79
r19       0x8      8
r20       0xe4     228
r21       0x1      1
r22       0x60     96
r23       0x1      1
r24       0x0      0
r25       0x1      1
r26       0xaa     170
r27       0xaa     170
r28       0xaa     170
r29       0xaa     170
r30       0xaa     170
r31       0xaa     170
SREG      0x34     52
SP        0x0      0x0 <reset_vector>
PC2       0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc        0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa  0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc9   201
r17          0x0    0
r18          0x4f   79
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xc9   201
r17          0x0    0
r18          0x50   80
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc9   201
r17         0x0    0
r18         0x50   80
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

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r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x0    0
r18         0x50   80
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115       inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x0    0
r18         0x50   80
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x0    0
r18         0x51   81
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xc1   193
r17         0x0    0
r18         0x51   81
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)      brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x0    0
r18         0x51   81
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xb9   185
r17          0x0    0
r18          0x51   81
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x0    0
r18         0x52   82
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb9   185
r17         0x0    0
r18         0x52   82
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) b rlo borrower
114          0xaa     170
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xb1     177
r17          0x0      0
r18          0x52     82
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x14    20
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) inc r18
115          0xaa     170
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x0    0
r18         0x52   82
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x14   20
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
116        rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xb1   177
r17         0x0    0
r18         0x53   83
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0xb1   177
r17          0x0     0
r18          0x53   83
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      brlo borrower
r0           0xaa   170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x0    0
r18         0x53   83
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x34   52
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x0    0
r18         0x53   83
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34    52
SP           0x0     <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa9   169
r17         0x0     0
r18         0x54   84
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20    32
SP           0x0     <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

113      sub r16, r19
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xa9   169
r17      0x0    0
r18      0x54   84
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x20   32
SP      0x0    0x0 <reset_vector>
PC2     0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc      0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
114      b rlo borrower
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xa1   161
r17      0x0    0

```

```

r18          0x54    84
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xa1   161
r17         0x0    0
r18         0x54   84
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x14   20
SP           0x0     0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0xa1   161
r17     0x0    0
r18     0x55   85
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG   0x0    0
SP      0x0    0x0 <reset_vector>
PC2    0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc      0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) sub r16, r19
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0xa1    161
r17          0x0     0
r18          0x55    85
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x99    153
r17         0x0     0
r18         0x55    85
r19         0x8     8
r20         0xe4    228
r21         0x1     1
r22         0x60    96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x34    52
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x99     153
r17         0x0      0
r18         0x55     85
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x34     52
SP          0x0      0x0 <reset_vector>
PC2         0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x99   153
r17          0x0    0
r18          0x56   86
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x99   153
r17         0x0    0
r18         0x56   86
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x91     145
r17         0x0      0
r18         0x56     86
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x14     20
SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x91   145
r17          0x0    0
r18          0x56   86
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x0    0
r18         0x57   87
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x0    0
SP          0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x91   145
r17         0x0    0
r18         0x57   87
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x89   137
r17          0x0    0
r18          0x57   87
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115      r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x0    0
r18         0x57   87
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x34   52
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x89   137
r17          0x0    0
r18          0x58   88
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x89   137
r17         0x0    0
r18         0x58   88
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) brlo borrower
114      brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x0    0
r18         0x58   88
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x81   129
r17          0x0    0
r18          0x58   88
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x14   20
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x0    0
r18         0x59   89
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaaa  0xaaaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x81   129
r17         0x0    0
r18         0x59   89
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114          brlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x79     121
r17          0x0      0
r18          0x59     89
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x38     56
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165 0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115          inc r18
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x0    0
r18         0x59   89
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x38   56
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x79   121
r17         0x0    0
r18         0x5a   90
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x79     121
r17          0x0      0
r18          0x5a     90
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      brlo borrower
r0           0xaa     170
r1           0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x0    0
r18         0x5a   90
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115         inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x0    0
r18         0x5a   90
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 116      rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x71     113
r17         0x0      0
r18         0x5b     91
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb) 113      sub r16, r19

```

```

r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x71   113
r17         0x0    0
r18         0x5b   91
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x69   105
r17         0x0    0
r18         0x5b   91

```

```

r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa    170
r1          0xaa    170
r2          0xaa    170
r3          0xaa    170
r4          0xaa    170
r5          0xaa    170
r6          0xaa    170
r7          0xaa    170
r8          0xaa    170
r9          0xaa    170
r10         0xaa    170
r11         0xaa    170
r12         0xaa    170
r13         0xaa    170
r14         0xaa    170
r15         0xaa    170
r16         0x69    105
r17         0x0      0
r18         0x5b    91
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa    170
r27         0xaa    170
r28         0xaa    170
r29         0xaa    170
r30         0xaa    170
r31         0xaa    170
SREG         0x20     32
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa

```

```
(gdb) rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x69   105
r17     0x0    0
r18     0x5c   92
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG   0x20   32
SP     0x0    0x0 <reset_vector>
PC2    0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc     0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 113      sub r16, r19
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x69   105
```

```

r17          0x0      0
r18          0x5c    92
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0x61    97
r17          0x0      0
r18          0x5c    92
r19          0x8      8
r20          0xe4    228
r21          0x1      1
r22          0x60    96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170
r15       0xaa     170
r16       0x61     97
r17       0x0      0
r18       0x5c     92
r19       0x8      8
r20       0xe4     228
r21       0x1      1
r22       0x60     96
r23       0x1      1
r24       0x0      0
r25       0x1      1
r26       0xaa     170
r27       0xaa     170
r28       0xaa     170
r29       0xaa     170
r30       0xaa     170
r31       0xaa     170
SREG      0x0      0
SP        0x0      0x0 <reset_vector>
PC2       0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116      rjmp divloop
r0        0xaa     170
r1        0xaa     170
r2        0xaa     170
r3        0xaa     170
r4        0xaa     170
r5        0xaa     170
r6        0xaa     170
r7        0xaa     170
r8        0xaa     170
r9        0xaa     170
r10       0xaa     170
r11       0xaa     170
r12       0xaa     170
r13       0xaa     170
r14       0xaa     170

```

```

r15          0xaa   170
r16          0x61   97
r17          0x0    0
r18          0x5d   93
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x61   97
r17         0x0    0
r18         0x5d   93
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>

```

```

PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x59     89
r17         0x0      0
r18         0x5d     93
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x20     32
SP          0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      inc r18
115
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170

```

```

r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x59   89
r17          0x0    0
r18          0x5d   93
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x59   89
r17         0x0    0
r18         0x5e   94
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170

```

```

SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc        0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170
r11      0xaa    170
r12      0xaa    170
r13      0xaa    170
r14      0xaa    170
r15      0xaa    170
r16      0x59    89
r17      0x0     0
r18      0x5e    94
r19      0x8     8
r20      0xe4    228
r21      0x1     1
r22      0x60    96
r23      0x1     1
r24      0x0     0
r25      0x1     1
r26      0xaa    170
r27      0xaa    170
r28      0xaa    170
r29      0xaa    170
r30      0xaa    170
r31      0xaa    170
SREG      0x20    32
SP        0x0     0x0 <reset_vector>
PC2       0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc        0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)
114      brlw borrower
r0       0xaa    170
r1       0xaa    170
r2       0xaa    170
r3       0xaa    170
r4       0xaa    170
r5       0xaa    170
r6       0xaa    170
r7       0xaa    170
r8       0xaa    170
r9       0xaa    170
r10      0xaa    170

```

```

r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x51   81
r17          0x0    0
r18          0x5e   94
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x0    0
r18         0x5e   94
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170

```

```

r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0   0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x0    0
r18         0x5f   95
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0
SP           0x0   0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170

```

```

r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x51   81
r17         0x0    0
r18         0x5f   95
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x0    0
r18         0x5f   95
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170

```

```

r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x49   73
r17          0x0    0
r18          0x5f   95
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170

```

```

r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x0    0
r18         0x60   96
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb) 113      sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x49   73
r17         0x0    0
r18         0x60   96
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1

```

```

r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
114          brlo borrower
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x41   65
r17          0x0    0
r18          0x60   96
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4   0x0084   0x0160   0x0349   0xaaaa   0xaaaa
(gdb)
115          inc r18
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170

```

```

r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x0    0
r18         0x60   96
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaaa     0xaaaaa
(gdb)
116         rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x41   65
r17         0x0    0
r18         0x61   97
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1

```

```

r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113         sub r16, r19
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0x41     65
r17          0x0      0
r18          0x61     97
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114         brlo borrower
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170

```

```

r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x0    0
r18         0x61   97
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x0    0
r18         0x61   97
r19         0x8    8
r20         0xe4   228
r21         0x1    1

```

```

r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20    32
SP           0x0     <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39    57
r17         0x0     0
r18         0x62    98
r19         0x8     8
r20         0xe4    228
r21         0x1     1
r22         0x60    96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20    32
SP           0x0     <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)      sub r16, r19
r0          0xaa   170

```

```

r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x39   57
r17         0x0    0
r18         0x62   98
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114       b rlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x0    0
r18         0x62   98
r19         0x8    8

```

```

r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x31   49
r17         0x0     0
r18         0x62   98
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8   0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

116      rjmp divloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x31   49
r17      0x0    0
r18      0x63   99
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x0    0
SP      0x0    0x0 <reset_vector>
PC2     0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc      0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
113      sub r16, r19
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0x31   49
r17      0x0    0

```

```

r18          0x63    99
r19          0x8     8
r20          0xe4   228
r21          0x1     1
r22          0x60   96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0     0
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) brlo borrower
114          r0      0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29   41
r17         0x0     0
r18         0x63   99
r19         0x8     8
r20         0xe4   228
r21         0x1     1
r22         0x60   96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0     0x0 <reset_vector>
PC2          0x1b6   438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6   0x1b6 <divloop+2>

```

```

0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 115      inc r18
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170
r16     0x29   41
r17     0x0    0
r18     0x63   99
r19     0x8    8
r20     0xe4   228
r21     0x1    1
r22     0x60   96
r23     0x1    1
r24     0x0    0
r25     0x1    1
r26     0xaa   170
r27     0xaa   170
r28     0xaa   170
r29     0xaa   170
r30     0xaa   170
r31     0xaa   170
SREG    0x20   32
SP      0x0    0x0 <reset_vector>
PC2     0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc      0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) 116      rjmp divloop
r0      0xaa   170
r1      0xaa   170
r2      0xaa   170
r3      0xaa   170
r4      0xaa   170
r5      0xaa   170
r6      0xaa   170
r7      0xaa   170
r8      0xaa   170
r9      0xaa   170
r10     0xaa   170
r11     0xaa   170
r12     0xaa   170
r13     0xaa   170
r14     0xaa   170
r15     0xaa   170

```

```

r16          0x29    41
r17          0x0     0
r18          0x64    100
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20    32
SP           0x0     0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165   0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)
113         sub r16, r19
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x29    41
r17         0x0     0
r18         0x64    100
r19         0x8     8
r20         0xe4    228
r21         0x1     1
r22         0x60    96
r23         0x1     1
r24         0x0     0
r25         0x1     1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20    32
SP           0x0     0x0 <reset_vector>
PC2          0x1b4   436

```

```

---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x21     33
r17         0x0      0
r18         0x64     100
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa   0x0165     0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb)      inc r18
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170

```

```

r14          0xaa   170
r15          0xaa   170
r16          0x21   33
r17          0x0    0
r18          0x64   100
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x21   33
r17         0x0    0
r18         0x65   101
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x0    0

```

```

SP          0x0      0x0 <reset_vector>
PC2         0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113        sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x21     33
r17         0x0      0
r18         0x65     101
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x0      0
SP          0x0      0x0 <reset_vector>
PC2         0x1b4    436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4    0x1b4 <divloop>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        b rlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170

```

```

r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x19   25
r17          0x0    0
r18          0x65   101
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x19   25
r17         0x0    0
r18         0x65   101
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170

```

```

r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
116          rjmp divloop
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x19   25
r17          0x0    0
r18          0x66   102
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
113          sub r16, r19
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170

```

```

r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x19   25
r17          0x0    0
r18          0x66   102
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc           0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa    0xaaaa
(gdb)      b rlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x0    0
r18         0x66   102
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170

```

```

r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      inc r18
115          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170
r8           0xaa   170
r9           0xaa   170
r10          0xaa   170
r11          0xaa   170
r12          0xaa   170
r13          0xaa   170
r14          0xaa   170
r15          0xaa   170
r16          0x11   17
r17          0x0    0
r18          0x66   102
r19          0x8    8
r20          0xe4   228
r21          0x1    1
r22          0x60   96
r23          0x1    1
r24          0x0    0
r25          0x1    1
r26          0xaa   170
r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b8   440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)      rjmp divloop
116          0xaa   170
r0           0xaa   170
r1           0xaa   170
r2           0xaa   170
r3           0xaa   170
r4           0xaa   170
r5           0xaa   170
r6           0xaa   170
r7           0xaa   170

```

```

r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x0    0
r18         0x67   103
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1ba  442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba  0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb)      sub r16, r19
113
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x11   17
r17         0x0    0
r18         0x67   103
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170

```

```

r27          0xaa   170
r28          0xaa   170
r29          0xaa   170
r30          0xaa   170
r31          0xaa   170
SREG         0x0    0
SP           0x0    0x0 <reset_vector>
PC2          0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) brlo borrower
114
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x0    0
r18         0x67   103
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG         0x20   32
SP           0x0    0x0 <reset_vector>
PC2          0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) inc r18
115
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170

```

```

r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x0    0
r18         0x67   103
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x20   32
SP          0x0    0x0 <reset_vector>
PC2         0x1b8  440
---Type <return> to continue, or q <return> to quit---
pc          0x1b8  0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165  0x01e4      0x0084      0x0160      0x0349      0xaaaaa    0xaaaaa
(gdb) 116      rjmp divloop
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x9    9
r17         0x0    0
r18         0x68   104
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0

```

```

r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1ba   442
---Type <return> to continue, or q <return> to quit---
pc          0x1ba   0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
113         sub r16, r19
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x9      9
r17         0x0      0
r18         0x68    104
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x20    32
SP           0x0      0x0 <reset_vector>
PC2          0x1b4   436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4   0x1b4 <divloop>
0x800100: 0xaaaa 0x0165 0x01e4 0x0084 0x0160 0x0349 0xaaaa 0xaaaa
(gdb)
114         brlo borrower
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170

```

```

r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x0    0
r18         0x68   104
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b6  438
---Type <return> to continue, or q <return> to quit---
pc          0x1b6  0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaa   0xaaaa
(gdb) 115      inc r18
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x0    0
r18         0x68   104
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96

```

```

r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1b8    440
---Type <return> to continue, or q <return> to quit---
pc           0x1b8    0x1b8 <divloop+4>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) rjmp divloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0x1      1
r17         0x0      0
r18         0x69    105
r19         0x8      8
r20         0xe4    228
r21         0x1      1
r22         0x60    96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG         0x0      0
SP           0x0      0x0 <reset_vector>
PC2          0x1ba    442
---Type <return> to continue, or q <return> to quit---
pc           0x1ba    0x1ba <divloop+6>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) sub r16, r19
r0          0xaa     170
r1          0xaa     170

```

```

r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0x1    1
r17         0x0    0
r18         0x69   105
r19         0x8    8
r20         0xe4   228
r21         0x1    1
r22         0x60   96
r23         0x1    1
r24         0x0    0
r25         0x1    1
r26         0xaa   170
r27         0xaa   170
r28         0xaa   170
r29         0xaa   170
r30         0xaa   170
r31         0xaa   170
SREG        0x0    0
SP          0x0    0x0 <reset_vector>
PC2         0x1b4  436
---Type <return> to continue, or q <return> to quit---
pc          0x1b4  0x1b4 <divloop>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
114        brlo borrower
r0          0xaa   170
r1          0xaa   170
r2          0xaa   170
r3          0xaa   170
r4          0xaa   170
r5          0xaa   170
r6          0xaa   170
r7          0xaa   170
r8          0xaa   170
r9          0xaa   170
r10         0xaa   170
r11         0xaa   170
r12         0xaa   170
r13         0xaa   170
r14         0xaa   170
r15         0xaa   170
r16         0xf9   249
r17         0x0    0
r18         0x69   105
r19         0x8    8
r20         0xe4   228

```

```

r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x35     53
SP           0x0      0x0 <reset_vector>
PC2          0x1b6    438
---Type <return> to continue, or q <return> to quit---
pc           0x1b6    0x1b6 <divloop+2>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
borrower () at lab2-4.asm:119
119          sub r17, r25 ;cannot use dec due to flag behaviour
r0           0xaa     170
r1           0xaa     170
r2           0xaa     170
r3           0xaa     170
r4           0xaa     170
r5           0xaa     170
r6           0xaa     170
r7           0xaa     170
r8           0xaa     170
r9           0xaa     170
r10          0xaa     170
r11          0xaa     170
r12          0xaa     170
r13          0xaa     170
r14          0xaa     170
r15          0xaa     170
r16          0xf9     249
r17          0x0      0
r18          0x69     105
r19          0x8      8
r20          0xe4     228
r21          0x1      1
r22          0x60     96
r23          0x1      1
r24          0x0      0
r25          0x1      1
r26          0xaa     170
r27          0xaa     170
r28          0xaa     170
r29          0xaa     170
r30          0xaa     170
r31          0xaa     170
SREG         0x35     53
SP           0x0      0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1bc    444
pc           0x1bc    0x1bc <borrower>
0x800100: 0xaaaa 0x0165      0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)

```

```

120      b rlo infloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xf9   249
r17      0xff   255
r18      0x69   105
r19      0x8    8
r20      0xe4   228
r21      0x1    1
r22      0x60   96
r23      0x1    1
r24      0x0    0
r25      0x1    1
r26      0xaa   170
r27      0xaa   170
r28      0xaa   170
r29      0xaa   170
r30      0xaa   170
r31      0xaa   170
SREG    0x35   53
SP      0x0    0x0 <reset_vector>
PC2     0x1be  446
---Type <return> to continue, or q <return> to quit---
pc      0x1be  0x1be <borrower+2>
0x800100: 0xaaaa 0x0165  0x01e4  0x0084  0x0160  0x0349  0xaaaa  0xaaaa
(gdb)
infloop () at lab2-4.asm:125
125      rjmp infloop
r0       0xaa   170
r1       0xaa   170
r2       0xaa   170
r3       0xaa   170
r4       0xaa   170
r5       0xaa   170
r6       0xaa   170
r7       0xaa   170
r8       0xaa   170
r9       0xaa   170
r10      0xaa   170
r11      0xaa   170
r12      0xaa   170
r13      0xaa   170
r14      0xaa   170
r15      0xaa   170
r16      0xf9   249

```

```

r17          0xff    255
r18          0x69    105
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x35    53
SP           0x0     0x0 <reset_vector>
---Type <return> to continue, or q <return> to quit---
PC2          0x1c4   452
pc           0x1c4   0x1c4 <infloop>
0x800100: 0xaaaa 0x0165  0x01e4    0x0084    0x0160    0x0349    0xaaaaa   0xaaaaa
(gdb)
125          rjmp infloop
r0           0xaa    170
r1           0xaa    170
r2           0xaa    170
r3           0xaa    170
r4           0xaa    170
r5           0xaa    170
r6           0xaa    170
r7           0xaa    170
r8           0xaa    170
r9           0xaa    170
r10          0xaa    170
r11          0xaa    170
r12          0xaa    170
r13          0xaa    170
r14          0xaa    170
r15          0xaa    170
r16          0xf9    249
r17          0xff    255
r18          0x69    105
r19          0x8     8
r20          0xe4    228
r21          0x1     1
r22          0x60    96
r23          0x1     1
r24          0x0     0
r25          0x1     1
r26          0xaa    170
r27          0xaa    170
r28          0xaa    170
r29          0xaa    170
r30          0xaa    170
r31          0xaa    170
SREG         0x35    53
SP           0x0     0x0 <reset_vector>
PC2          0x1c4   452
---Type <return> to continue, or q <return> to quit---

```

```

pc          0x1c4    0x1c4 <infloop>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb)
125        rjmp infloop
r0          0xaa     170
r1          0xaa     170
r2          0xaa     170
r3          0xaa     170
r4          0xaa     170
r5          0xaa     170
r6          0xaa     170
r7          0xaa     170
r8          0xaa     170
r9          0xaa     170
r10         0xaa     170
r11         0xaa     170
r12         0xaa     170
r13         0xaa     170
r14         0xaa     170
r15         0xaa     170
r16         0xf9     249
r17         0xff     255
r18         0x69     105
r19         0x8      8
r20         0xe4     228
r21         0x1      1
r22         0x60     96
r23         0x1      1
r24         0x0      0
r25         0x1      1
r26         0xaa     170
r27         0xaa     170
r28         0xaa     170
r29         0xaa     170
r30         0xaa     170
r31         0xaa     170
SREG        0x35     53
SP          0x0      0x0 <reset_vector>
PC2         0x1c4    452
---Type <return> to continue, or q <return> to quit---
pc          0x1c4    0x1c4 <infloop>
0x800100: 0xaaaa   0x0165    0x01e4      0x0084      0x0160      0x0349      0xaaaa      0xaaaa
(gdb) disassemble 0x0000, +20
Dump of assembler code from 0x0 to 0x800014:
0x00000000 <reset_vector+0>: jmp   0x100 ; 0x100 <start>
0x00000004 <reset_vector+4>: nop
0x00000006 <reset_vector+6>: nop
0x00000008 <reset_vector+8>: nop
0x0000000a <reset_vector+10>: nop
0x0000000c <reset_vector+12>: nop
0x0000000e <reset_vector+14>: nop
0x00000010 <reset_vector+16>: nop
0x00000012 <reset_vector+18>: nop
0x00000014 <reset_vector+20>: nop
0x00000016 <reset_vector+22>: nop
0x00000018 <reset_vector+24>: nop
0x0000001a <reset_vector+26>: nop
0x0000001c <reset_vector+28>: nop
0x0000001e <reset_vector+30>: nop

```

```

0x00000020 <reset_vector+32>:    nop
0x00000022 <reset_vector+34>:    nop
0x00000024 <reset_vector+36>:    nop
0x00000026 <reset_vector+38>:    nop
0x00000028 <reset_vector+40>:    nop
0x0000002a <reset_vector+42>:    nop
0x0000002c <reset_vector+44>:    nop
0x0000002e <reset_vector+46>:    nop
0x00000030 <reset_vector+48>:    nop
0x00000032 <reset_vector+50>:    nop
0x00000034 <reset_vector+52>:    nop
0x00000036 <reset_vector+54>:    nop
0x00000038 <reset_vector+56>:    nop
0x0000003a <reset_vector+58>:    nop
0x0000003c <reset_vector+60>:    nop
0x0000003e <reset_vector+62>:    nop
0x00000040 <reset_vector+64>:    nop
0x00000042 <reset_vector+66>:    nop
0x00000044 <reset_vector+68>:    nop
0x00000046 <reset_vector+70>:    nop
---Type <return> to continue, or q <return> to quit---
0x00000048 <reset_vector+72>:    nop
0x0000004a <reset_vector+74>:    nop
0x0000004c <reset_vector+76>:    nop
0x0000004e <reset_vector+78>:    nop
0x00000050 <reset_vector+80>:    nop
0x00000052 <reset_vector+82>:    nop
0x00000054 <reset_vector+84>:    nop
0x00000056 <reset_vector+86>:    nop
0x00000058 <reset_vector+88>:    nop
0x0000005a <reset_vector+90>:    nop
0x0000005c <reset_vector+92>:    nop
0x0000005e <reset_vector+94>:    nop
0x00000060 <reset_vector+96>:    nop
0x00000062 <reset_vector+98>:    nop
0x00000064 <reset_vector+100>:   nop
0x00000066 <reset_vector+102>:   nop
0x00000068 <reset_vector+104>:   nop
0x0000006a <reset_vector+106>:   nop
0x0000006c <reset_vector+108>:   nop
0x0000006e <reset_vector+110>:   nop
0x00000070 <reset_vector+112>:   nop
0x00000072 <reset_vector+114>:   nop
0x00000074 <reset_vector+116>:   nop
0x00000076 <reset_vector+118>:   nop
0x00000078 <reset_vector+120>:   nop
0x0000007a <reset_vector+122>:   nop
0x0000007c <reset_vector+124>:   nop
0x0000007e <reset_vector+126>:   nop
0x00000080 <reset_vector+128>:   nop
0x00000082 <reset_vector+130>:   nop
0x00000084 <reset_vector+132>:   nop
0x00000086 <reset_vector+134>:   nop
0x00000088 <reset_vector+136>:   nop
0x0000008a <reset_vector+138>:   nop
0x0000008c <reset_vector+140>:   nop
0x0000008e <reset_vector+142>:   nop
---Type <return> to continue, or q <return> to quit---
0x00000090 <reset_vector+144>:   nop
0x00000092 <reset_vector+146>:   nop

```

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0x00000094 <reset_vector+148>:    nop
0x00000096 <reset_vector+150>:    nop
0x00000098 <reset_vector+152>:    nop
0x0000009a <reset_vector+154>:    nop
0x0000009c <reset_vector+156>:    nop
0x0000009e <reset_vector+158>:    nop
0x000000a0 <reset_vector+160>:    nop
0x000000a2 <reset_vector+162>:    nop
0x000000a4 <reset_vector+164>:    nop
0x000000a6 <reset_vector+166>:    nop
0x000000a8 <reset_vector+168>:    nop
0x000000aa <reset_vector+170>:    nop
0x000000ac <reset_vector+172>:    nop
0x000000ae <reset_vector+174>:    nop
0x000000b0 <reset_vector+176>:    nop
0x000000b2 <reset_vector+178>:    nop
0x000000b4 <reset_vector+180>:    nop
0x000000b6 <reset_vector+182>:    nop
0x000000b8 <reset_vector+184>:    nop
0x000000ba <reset_vector+186>:    nop
0x000000bc <reset_vector+188>:    nop
0x000000be <reset_vector+190>:    nop
0x000000c0 <reset_vector+192>:    nop
0x000000c2 <reset_vector+194>:    nop
0x000000c4 <reset_vector+196>:    nop
0x000000c6 <reset_vector+198>:    nop
0x000000c8 <reset_vector+200>:    nop
0x000000ca <reset_vector+202>:    nop
0x000000cc <reset_vector+204>:    nop
0x000000ce <reset_vector+206>:    nop
0x000000d0 <reset_vector+208>:    nop
0x000000d2 <reset_vector+210>:    nop
0x000000d4 <reset_vector+212>:    nop
0x000000d6 <reset_vector+214>:    nop
---Type <return> to continue, or q <return> to quit---
0x000000d8 <reset_vector+216>:    nop
0x000000da <reset_vector+218>:    nop
0x000000dc <reset_vector+220>:    nop
0x000000de <reset_vector+222>:    nop
0x000000e0 <reset_vector+224>:    nop
0x000000e2 <reset_vector+226>:    nop
0x000000e4 <reset_vector+228>:    nop
0x000000e6 <reset_vector+230>:    nop
0x000000e8 <reset_vector+232>:    nop
0x000000ea <reset_vector+234>:    nop
0x000000ec <reset_vector+236>:    nop
0x000000ee <reset_vector+238>:    nop
0x000000f0 <reset_vector+240>:    nop
0x000000f2 <reset_vector+242>:    nop
0x000000f4 <reset_vector+244>:    nop
0x000000f6 <reset_vector+246>:    nop
0x000000f8 <reset_vector+248>:    nop
0x000000fa <reset_vector+250>:    nop
0x000000fc <reset_vector+252>:    nop
0x000000fe <reset_vector+254>:    nop
0x00000100 <start+0>:    ldi    r16, 0xC8    ; 200
0x00000102 <start+2>:    ldi    r17, 0x7B    ; 123
0x00000104 <start+4>:    ldi    r18, 0x02    ; 2
0x00000106 <start+6>:    ldi    r19, 0x20    ; 32
0x00000108 <start+8>:    ldi    r20, 0x15    ; 21

```

```

0x00000010a <start+10>: ldi r21, 0x6F ; 111
0x00000010c <start+12>: ldi r22, 0x61 ; 97
0x00000010e <start+14>: ldi r23, 0xFF ; 255
0x000000110 <start+16>: ldi r24, 0x00 ; 0
0x000000112 <start+18>: ldi r25, 0x01 ; 1
0x000000114 <start+20>: sts 0x0101, r24
0x000000118 <start+24>: sts 0x0103, r24
0x00000011c <start+28>: sts 0x0105, r24
0x000000120 <start+32>: sts 0x0107, r24
0x000000124 <start+36>: add r16, r17
0x000000126 <start+38>: brcc .+4 ; 0x12c <sk1>
---Type <return> to continue, or q <return> to quit---
0x000000128 <start+40>: sts 0x0101, r25
0x00000012c <sk1+0>: sts 0x0100, r16
0x000000130 <sk1+4>: add r18, r19
0x000000132 <sk1+6>: brcc .+4 ; 0x138 <sk2>
0x000000134 <sk1+8>: sts 0x0103, r25
0x000000138 <sk2+0>: sts 0x0102, r18
0x00000013c <sk2+4>: add r20, r21
0x00000013e <sk2+6>: brcc .+4 ; 0x144 <sk3>
0x000000140 <sk2+8>: sts 0x0105, r25
0x000000144 <sk3+0>: sts 0x0104, r20
0x000000148 <sk3+4>: add r22, r23
0x00000014a <sk3+6>: brcc .+4 ; 0x150 <sk4>
0x00000014c <sk3+8>: sts 0x0107, r25
0x000000150 <sk4+0>: sts 0x0106, r22
0x000000154 <sk4+4>: lds r16, 0x0100
0x000000158 <sk4+8>: lds r17, 0x0101
0x00000015c <sk4+12>: lds r18, 0x0102
0x000000160 <sk4+16>: lds r19, 0x0103
0x000000164 <sk4+20>: lds r20, 0x0104
0x000000168 <sk4+24>: lds r21, 0x0105
0x00000016c <sk4+28>: lds r22, 0x0106
0x000000170 <sk4+32>: lds r23, 0x0107
0x000000174 <sk4+36>: add r16, r18
0x000000176 <sk4+38>: adc r17, r19
0x000000178 <sk4+40>: sts 0x0100, r16
0x00000017c <sk4+44>: sts 0x0101, r17
0x000000180 <sk4+48>: add r20, r22
0x000000182 <sk4+50>: adc r21, r23
0x000000184 <sk4+52>: sts 0x0102, r20
0x000000188 <sk4+56>: sts 0x0103, r21
0x00000018c <sk4+60>: lds r16, 0x0100
0x000000190 <sk4+64>: lds r17, 0x0101
0x000000194 <sk4+68>: lds r18, 0x0102
0x000000198 <sk4+72>: lds r19, 0x0103
0x00000019c <sk4+76>: add r16, r18
0x00000019e <sk4+78>: adc r17, r19
---Type <return> to continue, or q <return> to quit---
0x0000001a0 <sk4+80>: sts 0x0108, r16
0x0000001a4 <sk4+84>: sts 0x0109, r17
0x0000001a8 <sk4+88>: lds r16, 0x0108
0x0000001ac <sk4+92>: lds r17, 0x0109
0x0000001b0 <sk4+96>: ldi r18, 0x00 ; 0
0x0000001b2 <sk4+98>: ldi r19, 0x08 ; 8
0x0000001b4 <divloop+0>: sub r16, r19
0x0000001b6 <divloop+2>: brcs .+4 ; 0x1bc <borrower>
0x0000001b8 <divloop+4>: inc r18
0x0000001ba <divloop+6>: rjmp .-8 ; 0x1b4 <divloop>
0x0000001bc <borrower+0>: sub r17, r25

```

```
0x000001be <borrower+2>: brcs .+4      ; 0x1c4 <infloop>
0x000001c0 <borrower+4>: inc r18       ; 0x1b4 <divloop>
0x000001c2 <borrower+6>: rjmp .-16      ; 0x1c4 <infloop>
=> 0x000001c4 <infloop+0>: rjmp .-2      ; 0x1c4 <infloop>
0x000001c6:    nop
0x000001c8:    nop
0x000001ca:    nop
0x000001cc:    nop
0x000001ce:    nop
0x000001d0:    nop
0x000001d2:    nop
0x000001d4:    nop
0x000001d6:    nop
0x000001d8:    nop
0x000001da:    nop
0x000001dc:    nop
0x000001de:    nop
0x000001e0:    nop
0x000001e2:    nop
0x000001e4:    nop
0x000001e6:    nop
0x000001e8:    nop
0x000001ea:    nop
0x000001ec:    nop
0x000001ee:    nop
---Type <return> to continue, or q <return> to quit---q
Quit
(gdb)
```