```
main()
{
  int s=1, q=2;

  int f()
  {
       int s=3;

       int g()
       {
          label_two:
          if ( s >= q )          In g: dv(s)=1, dv(q)=2
          {                             df(f)=2
             s = s - 1;
             q = q + 1;
             goto label_two;
          }
          else return f();
       }

       label_one:
       if ( s < q )
       {                      In f: dv(s)=0, dv(q)=1
                                    df(g)=0
          q = q - 2;
          goto label_one;
       }
       else return g();
   }
   s = f()/3 + 2*s;     In main: dv(s)=0,dv(q)=0,df(f)=0
}
```

```
0  set 0, 2                          Beginning of AR(main)
1  set 1, 7                          End of AR(main)
2  set 5, 1                          main: s
3  set 6, 2                          main: q
4  set 1, D[1] + 1                   space for ret. value
5  set D[1], 6 + 5                   RP
6  set D[1]+1, D[0]                  DL
7  set D[1]+2, fp(0)                 SL
8  set 0, D[1]                       CP
9  set 1, D[1] + 4                   FP  |AR(f)|=4
10 jump 13                           jump to code for f
11 set 5, D[D[1]]/3 + 2 * D[5]       s = 2*s + f()/3
12 halt                              STOP
13 set fp(0)+ 3, 3                   Code for f(): s=3
14 jumpt 17, D[fp(1)+3] >= D[fp(2)+4]  Jump if s >=q
15 set fp(1) + 4, D[fp(1)+4]-2       q = q-2
16 jump 14                           Goto
17 set 1, D[1] + 1                   space for ret. value
18 set D[1], 19 + 5                  RP
19 set D[1]+1, D[0]                  DL
20 set D[1]+2, fp(0)                 SL
21 set 0, D[1]                       CP
22 set 1, D[1] + 3                   FP   |AR(g)|=3
23 jump 28                           jump to code for g
24 set D[0]-1, D[D[1]]               return from g: RV
25 set 1, D[0]-1                     FP
26 set 0, D[D[0]+1]                  CP
27 jump D[D[1]+1]                    Return to caller
28 jumpt 30, D[fp(1)+3] < D[fp(2)+4]   Jump if s < q
29 set fp(1) + 3, D[fp(1)+3]-1       s = s-1
30 set fp(2) + 4, D[fp(2)+4]+1       q = q+1
31 jump 28                           Goto
32 set 1, D[1] + 1                   space for ret. value
33 set D[1], 34 + 5                  RP
34 set D[1]+1, D[0]                  DL
35 set D[1]+2, fp(2)                 SL
36 set 0, D[1]                       CP
37 set 1, D[1] + 4                   FP  |AR(f)|=4
38 jump 13                           jump to code for f
39 set D[0]-1, D[D[1]]               return from f: RV
40 set 1, D[0]-1                     FP
41 set 0, D[D[0]+1]                  CP
42 jump D[D[1]+1]                    Return to caller
```