AUTOMATICALLY GENERATED LATEX

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0.1 INPUT CODE

```
someConstructs(a, b)
{
   for (i = 0; i<b; i=i+1)
   {
      a = b - 1;
   }
   while (a < b)
   {
      a = a + 1;
   }
   if (a < b)
   {
      return a;
   }
   do
   {
      a = a -1;
   }
   while ( a >= b && a != b );
   return b;
}
```

0.2 CONVERTED LINES

$$someConstructs(a, b) = L_2(a, b, \infty)$$

$$L_2(a, b, i) = L_3(a, b, i)$$

$$L_3(a, b, i) = F_1(a, b, 0)$$

$$F_1(a, b, i) = \Delta_{i<b}(L_4(a, b, i), L_7(a, b, i))$$

$$L_4(a, b, i) = L_5(a, b, i)$$

$$L_5(a,b,i) = L_6(b-1,b,i)$$

$$L_6(a,b,i) = F_1(a,b,i+1)$$

$$L_7(a,b,i) = W_1(a,b,i)$$

$$W_1(a,b,i) = \Delta_{a<b}(L_8(a,b,i), L_{11}(a,b,i))$$

$$L_8(a,b,i) = L_9(a,b,i)$$

$$L_9(a,b,i) = L_{10}(a+1,b,i)$$

$$L_{10}(a,b,i) = L_7(a,b,i)$$

$$L_{11}(a,b,i) = \Delta_{a<b}(L_{12}(a,b,i), L_{14}(a,b,i))$$

$$L_{12}(a,b,i) = L_{13}(a,b,i)$$

$$L_{13}(a,b,i) = a$$

$$L_{14}(a,b,i) = L_{15}(a,b,i)$$

$$L_{15}(a,b,i) = L_{16}(a,b,i)$$

$$L_{16}(a,b,i) = L_{17}(a,b,i)$$

$$L_{17}(a,b,i) = L_{18}(a-1,b,i)$$

$$L_{18}(a,b,i) = L_{19}(a,b,i)$$

$$L_{19}(a,b,i) = W_2(a,b,i)$$

$$W_2(a,b,i) = \Delta_{a\geq b \text{ AND } a\neq b}(L_{15}(a,b,i), L_{20}(a,b,i))$$

$$L_{20}(a,b,i) = b$$

$$L_{21}(a,b,i) = \infty$$

0.3 SQUISHED LINES

$$someConstructs(a,b) = F_1(a,b,0)$$

$$F_1(a,b,i) = \Delta_{i<b}(F_1(b-1,b,i+1), W_1(a,b,i))$$

$$W_1(a,b,i) = \Delta_{a<b}(W_1(a+1,b,i), \Delta_{a<b}(a, W_2(a-1,b,i)))$$

$$W_2(a,b,i) = \Delta_{a\geq b \text{ AND } a\neq b}(W_2(a-1,b,i), b)$$

0.4 CONVERTED CODE

```
function someConstructs(a,b) {
    return F1(a,b,0);
}
function F1(a,b,i) {
    return (i<b) ? F1(b - 1,b,i+1) : W1(a,b,i);
}
function W1(a,b,i) {
    return (a < b) ? W1(a + 1,b,i) : (a < b) ? a : W2(a -1,b,i);
}
function W2(a,b,i) {
    return (a >= b && a != b) ? W2(a -1,b,i) : b;
}
```