$\sqrt{13}$

$3+\sqrt{13}-3$

$\frac{\sqrt{13}+3}{4}$

1 $\frac{4(\sqrt{13}+1)}{12}$

1 $\frac{3(\sqrt{13}+2)}{9}$

$2-1=$ $\frac{(\sqrt{13}+1)}{12}$

$\sqrt{11}$

$3+\sqrt{11}-3$

$\frac{\sqrt{11}+3}{2}$

2 $\frac{2(\sqrt{11}+1)}{10}$

1 $\frac{5(\sqrt{11}+4)}{-5}$

$3+\sqrt{11}-3$

$\frac{\sqrt{11}+3}{2}$

3 $\frac{2(\sqrt{11}+3)}{2} = \sqrt{11}+3$

3. $\boxed{i_{0_n} c - b_0 = b_1 (= b)}$

$c = 1 - b^2$

JUST 2 steps!!!!!

$3+\sqrt{13}-3$

1 $\frac{\sqrt{13}+3}{4}$

Algorithm:

1. ~~Calculate next iteration of a, b, c~~ w/ current iteration of a_0, b_0, c_0 try to calculate i_0 s.t. b_1 is maximized, i.e., $b_1 = \text{floor}(\text{sqrt}(i))$
 - do this by adding floor(sqrt(i)) to b_0 since that is the hoped b_1
 → want $i_0 c - b_0 = \text{floor}(\text{sqrt}(i)) \Rightarrow$ want $i_0 c = b_0 + \text{floor}(\text{sqrt}(i))$
 Then let $\boxed{i_{0_n} = \frac{b_0 + \text{floor}(\text{sqrt}(i))}{c}}$ (integral division)
2. w/ i_0 calculated, next a, b, c, is trivial (a calculated same thing, update b, c)