```
1 import numpy as np
2 a=1
3 b=np.sqrt(0.5)
4 t=0.25
5 p=1
6 for i in range(1,4):
    a1=(a+b)/2
    b1=np.sqrt(a*b)
8
    t1=t-p*(a-a1)**2
9
10
    p1=2*p
    a=a1
11
    b=b1
12
    t=t1
13
    p=p1
14
15 mypi=((a+b)**2)/(4*t)
16 print(mypi)
```