

```
eps = 1e-10

def suite(x, n):
    if n == 0:
        return x
    a, b = x, 0
    for k in range(2, n+1):
        a, b = b, (a**2 + b**2)/2
    return b

def test_L_nul(x):
    a, b = x, 0
    while (a-1)*(b-1) < 0:
        a, b = b, (a**2 + b**2)/2
    return a <= 1

u, v = 0, 5
while v-u > eps:
    w = (u+v)/2
    if test_L_nul(w):
        u = w
    else:
        v = w

print(u) # 1.5869279328
```