

Find the square root of a number

› AIM:

To write a program to find the square root of a number.

› Equipments Required:

1. Hardware – PCs
2. Anaconda – Python 3.7 Installation / Moodle-Code Runner

› Algorithm

1. Define a function.
2. Assign number_iters = 100 in the function to perform 100 iterations.
3. Set i = 0.
4. Calculate number = 0.5 * (number + a / number) for 100 iterations.
5. Return number

› Program:

Program to find the square root for the given number(newton's method) using function.
Developed by: JOTHIKRISHNAA V
RegisterNumber: 212223100017



```
def sq_root(n):  
    a=0.5*n  
    b=0.5*(a+n/a)  
    while(b!=a):  
        a=b  
        b=0.5*(a+n/a)  
    print("Square root of the number:",a)  
n=int(input())  
sq_root(n)
```



› Output:

```

1 #Program to find the square root for the given number(newton's method) using function.
2 #Developed by : JOTHIKRISHNAA V
3 #RegisterNumber: 212223100017
4
5 def sq_root(n):
6     a=0.5*n
7     b=0.5*(a+n/a)
8     while(b!=a):
9         a=b
10        b=0.5*(a+n/a)
11    print("Square root of the number:",a)
12 n=int(input())
13 sq_root(n)
14

```

	Input	Expected	Got	
✓	10	Square root of the number: 3.162277660168379	Square root of the number: 3.162277660168379	✓
✓	4	Square root of the number: 2.0	Square root of the number: 2.0	✓
✓	64	Square root of the number: 8.0	Square root of the number: 8.0	✓

Passed all tests! ✓

Result:

Thus the program to find the square root for the given number(newton's method) using function is written and verified using python programming.