Using a function to approximate the logarithm

An approximation to the natural logarithm is given by

$$\log(1+x) = \lim_{n\to\infty} \sum_{i=1}^{n} \frac{1}{i} \left(\frac{x}{1+x} \right)^i \tag{1}$$

Otherwise, simply:

$$\log(1+x) = \sum_{i=1}^{\infty} \frac{1}{i} \left(\frac{x}{1+x} \right)^i \tag{2}$$

Write a python function that verifies that

$$\log(1.1) = 0.09531 \tag{3}$$

You will want to replace 'infinity' with just a large number, like 1000. You can even set your program to stop when the difference between two successive computations is small enough.

Using the `math` module

There's actually a much simpler (and more efficient) way to calculate the logarithm:

```
import math
print math.log(1.1)
```