
Python — Functions with numbers

P84591_en

In this problem you must implement several functions in Python.

1. Write a function *absValue(x)* that, given a number, returns its absolute value.
2. Write a function *power(x, p)* that, given a number x and a natural p , returns x raised to p , that is, x^p .
3. Write a function *isPrime(x)* that, given a natural, returns a Boolean that tells whether it is a prime number or not.
4. Write a function *slowFib(n)* that, returns the n -th element of the Fibonacci sequence using the recursive algorithm according to its definition ($f(0) = 0$, $f(1) = 1$, $f(n) = f(n - 1) + f(n - 2)$ for $n \geq 2$).
5. Write a function *quickFib(n)* that, returns the n -th element of the Fibonacci sequence using a faster algorithm.

Scoring

Each function scores 20 points.

Sample session

```
>>> absValue(-666)
666
>>> power(2, 3)
8
>>> isPrime(17)
True
>>> slowFib(5)
5
>>> quickFib(40)
102334155
```

Problem information

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