
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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