Large non-Mersenne prime

Problem 97 (http://projecteuler.net/problem=97)

The first known prime found to exceed one million digits was discovered in 1999, and is a Mersenne prime of the form $2^{6972593} - 1$; it contains exactly 2,098,960 digits. Subsequently other Mersenne primes, of the form 2p−1, have been found which contain more digits.

However, in 2004 there was found a massive non-Mersenne prime which contains 2,357,207 digits: $28433 \times 2^{7830457} + 1$.

Find the last ten digits of this prime number.

Solution

Python is fun! =) It'll take long, be careful!

In [1]:
```
str(28433*(2**7830457)+1)[-10:]
```

Out[1]:
```
'8739992577'
```