

TP 8: Euler function and Carmichael numbers

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1 Euler function

Write a program `euler` that prints the Euler function of n :

```
$ euler 10
4
```

2 Carmichael numbers

A Carmichael number is an odd composite integer n such that Fermat's little theorem

$$a^{n-1} - 1 \equiv 0 \pmod{n}$$

is satisfied for every choice of $1 < a < n$ such that $\gcd(a, n) = 1$.

For example, 561 is the smallest Carmichael number. Write a program that prints every Carmichael numbers less than 10000.