Truncatable Primes • Mark Senn • last updated on 2022-01-15 at 12:19-05

Problem Statement

From The Weekly Challenge - 147 Task #1: Truncatable Prime retrieved on 2022-01-15 at 10:00-05:

> **Submitted by:** Mohammad S Anwar
>
> Write a script to generate first 20 left-truncatable prime numbers in base 10.
>
> > In number theory, a left-truncatable prime is a prime number which, in a given base,
> > contains no 0, and if the leading left digit is successively removed, then all resulting
> > numbers are primes.
>
> > **Example**
> >
> > 9137 is one such left-truncatable prime since 9137, 137, 37 and 7 are all prime
> > numbers.

Raku Solution

```
# Number of numbers printed.
my $n = 0;

# Truncatable primes are primes that don't contain zero.
for (2 .. Inf).grep(*.is-prime).grep({! /0/}) -> $test  {

    # If, for example, $test is 9137, check that 137, 37, and 7 are all primes.
    my $found = True;
    for (1 .. $test.chars-1) -> $i  {
        ($test.substr($i).is-prime)  or  $found = False,  last;
    }
    ($found)  and  $test.say,  $n++;

    # Only print the first 20 truncatable primes.
    ($n >= 20)  and  last;

}
```