Given a natural number $n$, let $s(n)$ be the sum of the digits of $n$. In this exercise, we say that $n$ is a perfect prime if the infinite sequence $n, s(n), s(s(n)), \ldots$ only contains prime numbers. For instance, 977 is a perfect prime, because $977, 9 + 7 + 7 = 23, 2 + 3 = 5, 5, \ldots$, are all prime numbers.

Write a recursive function that tells if a natural number $n$ is a perfect prime or not.

Interface

**C++**
```
bool is_perfect_prime (int n);
```

**C**
```
int is_perfect_prime (int n);
```

**Java**
```
public static boolean isPerfectPrime(int n);
```

**Python**
```
is_perfect_prime (n)  # returns bool

is_perfect_prime (n: int) -> bool
```

**Precondition**

We have $n \geq 0$.

**Observation**

You only need to submit the required procedure; your main program will be ignored.

**Problem information**

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Generation: 2023-07-14 17:48:43