Problem 25: Sum of Digits

Given two natural numbers x and k, compute the sum of digits representing x in base-k.

$$
\begin{array}{lcccccc}
A & = & \mathbb{N} & \times & \mathbb{N} & \times & \mathbb{N} \\
 & & x & & k & & s \\
B & = & \mathbb{N} & \times & \mathbb{N} & & \\
 & & x' & & k' & & \\
Q & = & (x' = x) \wedge (k' = k) & & & & \\
R & = & Q \wedge s = \sum_{i=0}^{\lfloor \log_k x \rfloor} (x \bmod k^{i+1}) \operatorname{div} k^i & & & &
\end{array}
$$