

Base-b Expansion

ALGORITHM 1 Constructing Base b Expansions.

procedure *base b expansion*(n, b : positive integers with $b > 1$)

$q := n$

$k := 0$

while $q \neq 0$

$a_k := q \bmod b$

$q := q \operatorname{div} b$

$k := k + 1$

return $(a_{k-1}, \dots, a_1, a_0)$ $\{(a_{k-1} \dots a_1 a_0)_b$ is the base b expansion of $n\}$