

search_succ^{4,23}

$\forall k:\mathbb{N}, P:(\mathbb{N}_{<k+1} \rightarrow \mathbb{B}).$

$\text{search}(k+1;P) = \text{if } P(0) \rightarrow 1 ; 0 <_2 \text{search}(k;\lambda i.P(i+1)) \rightarrow \text{search}(k;\lambda i.P(i+1))+1 \text{ else } 0 \text{ fi} \in \mathbb{Z}$