

IH

$$\forall n \geq 0, \forall k \geq 1. \underline{fib}(n) + (\underline{fib}(k-1)) (\underline{fib}(k)) = \underline{fib}(n+k)$$

IB $n=0$:

$$\forall k \geq 1. \underline{fib}(0) (\underline{fib}(k-1)) (\underline{fib}(k)) \stackrel{ZV}{=} \underline{fib}(k) \\ = \underline{fib}(k)$$

IS $n \rightarrow n+1$:

$$\underline{fib}(n+1) (\underline{fib}(k-1)) (\underline{fib}(k)) \stackrel{?}{=} \underline{fib}(n+1+k)$$

$$\underline{fib}(n) (\underline{fib}(k)) (\underline{fib}(k-1) + \underline{fib}(k))$$

$$\underline{fib}(n) (\underline{fib}(k)) (\underline{fib}(k+1))$$

