

# t52\_fib\_num2

## (TMK3ErrZqh1ch2GYbazpCThL2MRxfQrJCbt)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_fib\_num2 : \iota$  be given. Let  $k3\_fib\_num2 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow ((k4\_nat\_1 np\_2 X0 \in k3\_fib\_num2) \wedge (\neg k2\_nat\_1 (k4\_nat\_1 np\_2 X0) np\_1 \in k3\_fib\_num2)) \quad (1)$$

Assume the following.

$$\forall X0 : \iota \Rightarrow \iota. \exists X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \wedge (\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (k1\_seq\_1 X1 X2 = X0 X2)) \quad (2)$$

Assume the following.

$$k4\_fib\_num2 = ReplSep (toset (\lambda X0 : \iota. m2\_subset\_1 X0 k1\_numbers k5\_numbers)) (\lambda X0 : \iota. True) (\lambda X0 : \iota. k2\_nat\_1 (k4\_nat\_1 np\_2 X0) np\_1) \quad (3)$$

### Theorem 1

$$\forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow ((k2\_nat\_1 (k4\_nat\_1 np\_2 X0) np\_1 \in k4\_fib\_num2) \wedge (\neg k4\_nat\_1 np\_2 X0 \in k4\_fib\_num2))$$