

t37_fib_num3

(TMGx4GZcXjaTZsWz1HTma1vCGf4YuaEM4Z3)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k3_fib_num3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_pre_ff : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_xboole.0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v2_xreal.0 : \iota \Rightarrow o$ be given. Let $m2_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (k2_nat.1 (k3_fib_num3 X0 X1 X2) (k3_fib_num3 \\ & X0 X1 (k1_nat.1 X2 np_1)) = k3_fib_num3 X0 X1 (k1_nat.1 X2 np_2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\\ & k3_fib_num3 X0 X1 k6_numbers = X0) \wedge ((k3_fib_num3 X0 X1 np_1 = X1) \wedge \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (k3_fib_num3 X0 X1 (k2_nat.1 (k1_nat.1 \\ & X2 np_1) np_1) = k2_nat.1 (k3_fib_num3 X0 X1 X2) (k3_fib_num3 X0 \\ & X1 (k1_nat.1 X2 np_1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k1_pre_ff (k1_nat.1 X0 np_2) = k2_nat.1 (k1_pre_ff X0) (k1_pre_ff (k1_nat.1 X0 np_1))) \quad (3)$$

Assume the following.

$$\begin{aligned} & (k1_pre_ff k6_numbers = k6_numbers) \wedge ((k1_pre_ff np_1 = np_1) \wedge \\ & (\forall X0.(v7_ordinal1 X0) \Rightarrow (k1_pre_ff (k2_nat.1 (k1_nat.1 \\ & X0 np_1) np_1) = k2_nat.1 (k1_pre_ff X0) (k1_pre_ff (k1_nat.1 \\ & X0 np_1)))) \end{aligned} \quad (4)$$

Assume the following.

$$m1_subset.1 k1_xboole.0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ } np_1) \wedge (m2_subset_1 \text{ } np_1 \text{ } k1_numbers \text{ } k5_numbers)) \wedge \\ & ((m1_subset_1 \text{ } np_1 \text{ } k5_numbers) \wedge (m1_subset_1 \text{ } np_1 \text{ } k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \text{ } k6_numbers) \wedge ((X0 \text{ } np_1) \wedge (\forall X1. \\ & (v7_ordinal1 \text{ } X1) \Rightarrow (((X0 \text{ } X1) \wedge (X0 \text{ } (k1_nat_1 \text{ } X1 \text{ } np_1))) \Rightarrow (X0 \text{ } (k1_nat_1 \\ & X1 \text{ } np_2)))))) \Rightarrow (\forall X1. (v7_ordinal1 \text{ } X1) \Rightarrow (X0 \text{ } X1)) \end{aligned} \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 \text{ } X0 \text{ } k4_ordinal1) \Rightarrow (v7_ordinal1 \text{ } X0) \quad (10)$$

Theorem 1

$$\forall X0. (m1_subset_1 \text{ } X0 \text{ } k5_numbers) \Rightarrow (k3_fib_num3 \text{ } k6_numbers \text{ } np_1 \text{ } X0 = k1_pre_ff \text{ } X0)$$