

t13_fib_num3

(TMHNnB4ZUa3BAcfzKDSFrfnBRXjKT7omWme)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fib_num3 : \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & (k1_fib_num3\ k6_numbers = np_2) \wedge ((k1_fib_num3\ np_1 = np_1) \wedge \\ & (\forall X0.(v7_ordinal1\ X0) \Rightarrow (k1_fib_num3\ (k2_nat_1\ (k1_nat_1 \\ & X0\ np_1)\ np_1) = k2_nat_1\ (k1_fib_num3\ X0)\ (k1_fib_num3\ (k1_nat_1 \\ & X0\ np_1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmplx_0\ X0) \wedge ((v1_xcmplx_0 \\ & X1) \wedge (v1_xcmplx_0\ X2))) \Rightarrow (k2_xcmplx_0\ (k2_xcmplx_0\ X0\ X1)\ X2 = k2_xcmplx_0 \\ & X0\ (k2_xcmplx_0\ X1\ X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \tag{5}$$

Assume the following.

$$k2_xcmplx_0 \text{ } np_2 \text{ } np_1 = np_3 \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \text{ } np_1 \text{ } np_1 = np_2 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \text{ } X0 \text{ } k5_numbers)\wedge(v7_ordinal1 \text{ } X1))\Rightarrow(k2_nat_1 \text{ } X0 \text{ } X1 = k2_xcmplx_0 \text{ } X0 \text{ } X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \text{ } X0)\wedge(m1_subset_1 \text{ } X1 \text{ } k5_numbers))\Rightarrow(k1_nat_1 \text{ } X0 \text{ } X1 = k2_xcmplx_0 \text{ } X0 \text{ } X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \text{ } X0)\wedge(v7_ordinal1 \text{ } X1))\Rightarrow(v7_ordinal1 \text{ } (k2_xcmplx_0 \text{ } X0 \text{ } X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \text{ } X0)\wedge(v1_xcmplx_0 \text{ } X1))\Rightarrow(k2_xcmplx_0 \text{ } X0 \text{ } X1 = k2_xcmplx_0 \text{ } X1 \text{ } X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \text{ } X0 \text{ } k5_numbers)\wedge(v7_ordinal1 \text{ } X1))\Rightarrow(k2_nat_1 \text{ } X0 \text{ } X1 = k2_nat_1 \text{ } X1 \text{ } X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \text{ } X0)\wedge(m1_subset_1 \text{ } X1 \text{ } k5_numbers))\Rightarrow(k1_nat_1 \text{ } X0 \text{ } X1 = k1_nat_1 \text{ } X1 \text{ } X0) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 \text{ } X0 \text{ } k4_ordinal1)\Rightarrow(v7_ordinal1 \text{ } X0) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \text{ } X0)\Rightarrow(v1_xcmplx_0 \text{ } X0) \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \text{ } X0)\Rightarrow(v1_xreal_0 \text{ } X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 \text{ } X0 \text{ } k1_numbers)\Rightarrow(v1_xcmplx_0 \text{ } X0) \quad (18)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k2_nat_1\ (k1_fib_num3\ (k1_nat_1\ X0\ np_1))\ (k1_fib_num3\ (k1_nat_1\ X0\ np_2))) = k1_fib_num3\ (k1_nat_1\ X0\ np_3)$$