

t27_fib_num2

(TMFbYzSJsq8aTF6ro6kzfkQwxz7uoyVZWXC)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_pre_ff : \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_5 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $np_4 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ 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 $np_0 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & (k1_pre_ff\ k6_numbers = k6_numbers) \wedge ((k1_pre_ff\ np_1 = np_1) \wedge \\ & (\forall X0.(v7_ordinal1\ X0) \Rightarrow (k1_pre_ff\ (k2_nat_1\ (k1_nat_1\ \\ & X0\ np_1)\ np_1) = k2_nat_1\ (k1_pre_ff\ X0)\ (k1_pre_ff\ (k1_nat_1\ \\ & X0\ np_1)))))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0) \Rightarrow (k2_xcmplx_0\ X0\ k6_numbers = X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmplx_0\ X0) \wedge ((v1_xcmplx_0\ \\ & X1) \wedge (v1_xcmplx_0\ X2))) \Rightarrow (k2_xcmplx_0\ (k2_xcmplx_0\ X0\ X1)\ X2 = k2_xcmplx_0\ \\ & X0\ (k2_xcmplx_0\ X1\ X2)) \quad (4) \end{aligned}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_5) \wedge (m2_subset_1\ np_5\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_5\ k5_numbers) \wedge (m1_subset_1\ np_5\ k1_numbers)) \quad (5) \end{aligned}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_4) \wedge (m2_subset_1 \ np_4 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_4 \ k5_numbers) \wedge (m1_subset_1 \ np_4 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_3) \wedge (m2_subset_1 \ np_3 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_3 \ k5_numbers) \wedge (m1_subset_1 \ np_3 \ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & (m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \\ & \quad k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (10)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ np_4 = np_5 \quad (11)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ np_3 = np_4 \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & \quad X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \\ & \quad X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (17)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1)\wedge(v3_ordinal1\ k4_ordinal1) \quad (18)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (19)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (m2_subset_1\ (k1_nat_1\ X0\ X1)\ k1_numbers\ k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0\ X0)\wedge(v1_xcmplx_0\ X1))\Rightarrow (k2_xcmplx_0\ X0\ X1 = k2_xcmplx_0\ X1\ X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (k1_nat_1\ X0\ X1 = k1_nat_1\ X1\ X0) \quad (23)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (26)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(k1_pre_ff\ (k1_nat_1\ X0\ np_5) = k2_nat_1\ (k1_pre_ff\ (k1_nat_1\ X0\ np_3))\ (k1_pre_ff\ (k1_nat_1\ X0\ np_4)))$$