

t35_fib_num3 (TMNpWWfeC-
nzJ1LTjAiU2ZUKo6MTxQcrajbs)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_fib_num3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\\ & k3_fib_num3 X0 X1 k6_numbers = X0) \wedge ((k3_fib_num3 X0 X1 np_1 = X1) \wedge \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (k3_fib_num3 X0 X1 (k2_nat_1 (k1_nat_1 \\ & X2 np_1) np_1) = k2_nat_1 (k3_fib_num3 X0 X1 X2) (k3_fib_num3 X0 \\ & X1 (k1_nat_1 X2 np_1))))))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

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

Assume the following.

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

Assume the following.

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

Assume the following.

$$k2_xcmplx_0 \ np_1 \ np_2 = np_3 \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ np_1 = np_2 \quad (7)$$

Assume the following.

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

Assume the following.

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

Assume the following.

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

Assume the following.

$$\exists X0.(\neg v1_xboole_0 \ X0)\wedge(v7_ordinal1 \ X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0)\wedge(v7_ordinal1 \ X1))\Rightarrow(v7_ordinal1 \ (k2_xcmplx_0 \ X0 \ X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 \ X0)\wedge((v7_ordinal1 \ X1)\wedge(v7_ordinal1 \ X2)))\Rightarrow(m1_subset_1 \ (k3_fib_num3 \ X0 \ X1 \ X2) \ k5_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0)\wedge(v1_xcmplx_0 \ X1))\Rightarrow(k2_xcmplx_0 \ X0 \ X1 = k2_xcmplx_0 \ X1 \ X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k5_numbers)\wedge(v7_ordinal1 \ X1))\Rightarrow(k2_nat_1 \ X0 \ X1 = k2_nat_1 \ X1 \ X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0)\wedge(m1_subset_1 \ X1 \ k5_numbers))\Rightarrow(k1_nat_1 \ X0 \ X1 = k1_nat_1 \ X1 \ X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (k2_nat_1 (k3_fib_num3 X0 X1 (k1_nat_1 X2 np_1)) \\ & (k3_fib_num3 X0 X1 (k1_nat_1 X2 np_2)) = k3_fib_num3 X0 X1 (k1_nat_1 \\ & X2 np_3)))) \end{aligned}$$