

t38_fib_num3
(TMVDabhHZ35hdcgQNEbqzRremv8J9L28aAd)

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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 $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_fib_num3 : \iota \Rightarrow \iota$ 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 $k6_numbers : \iota$ 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. Let $k4_ordinal1 : \iota$ 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.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k1_fib_num3 (k1_nat_1 X0 np_2) = k2_nat_1 (k1_fib_num3 X0) (k1_fib_num3 (k1_nat_1 X0 np_1))) \quad (3)$$

Assume the following.

$$\begin{aligned} & (k1_fib_num3 k6_numbers = np_2) \wedge ((k1_fib_num3 np_1 = np_1) \wedge \\ & (\forall X0.(v7_ordinal1 X0) \Rightarrow (k1_fib_num3 (k2_nat_1 (k1_nat_1 \\ & X0 np_1) np_1) = k2_nat_1 (k1_fib_num3 X0) (k1_fib_num3 (k1_nat_1 \\ & X0 np_1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

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

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 \ X0 \ k5_numbers) \Rightarrow (k3_fib_num3 \ np_2 \ np_1 \\ & X0 = k1_fib_num3 \ X0) \end{aligned}$$