

t15_moebius1

(TMddUeGQ6r47GzYsGGcVjPd1xqEgn5Ze3vi)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $k1_polynom2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_newton : \iota$ be given. Let $k13_nat_3 : \iota \Rightarrow \iota$ be given. Let $k11_nat_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ be given. Let $v2_pre_poly : \iota \Rightarrow o$ be given. Let $k13_pre_poly : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k12_nat_3 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ (v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge ((v4_valued_0 X1) \wedge (v2_pre_poly \\ X1)))))) \Rightarrow (k1_polynom2 X0 X1 = k13_pre_poly X1) \end{aligned} \quad (3)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((v1_relat_1 \\ (k13_nat_3 X0)) \wedge ((v4_relat_1 (k13_nat_3 X0) k10_newton) \wedge ((v1_funct_1 \\ (k13_nat_3 X0)) \wedge ((v1_partfun1 (k13_nat_3 X0) k10_newton) \wedge ((\\ v4_valued_0 (k13_nat_3 X0)) \wedge (v2_pre_poly (k13_nat_3 X0)))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 \ X0) \wedge (v7_ordinal1 \ X0)) \Rightarrow ((v1_relat_1 \\ (k12_nat_3 \ X0)) \wedge ((v4_relat_1 \ (k12_nat_3 \ X0) \ k10_newton) \wedge ((v1_funct_1 \\ (k12_nat_3 \ X0)) \wedge ((v1_partfun1 \ (k12_nat_3 \ X0) \ k10_newton) \wedge (v2_pre_poly \\ (k12_nat_3 \ X0))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v1_relat_1 \ (k12_nat_3 \ X0)) \wedge ((\\ v4_relat_1 \ (k12_nat_3 \ X0) \ k10_newton) \wedge ((v1_funct_1 \ (k12_nat_3 \\ X0)) \wedge ((v1_partfun1 \ (k12_nat_3 \ X0) \ k10_newton) \wedge (v4_valued_0 \\ (k12_nat_3 \ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 \ X0) \wedge (v7_ordinal1 \ X0)) \Rightarrow (\forall X1. \\ ((v1_relat_1 \ X1) \wedge ((v4_relat_1 \ X1 \ k10_newton) \wedge ((v1_funct_1 \ X1) \wedge \\ (v1_partfun1 \ X1 \ k10_newton)))) \Rightarrow ((X1 = k13_nat_3 \ X0) \Leftrightarrow ((k13_pre_poly \\ X1 = k1_polynom2 \ k10_newton \ (k12_nat_3 \ X0)) \wedge (\forall X2.(v7_ordinal1 \\ X2) \Rightarrow ((X2 \in k1_polynom2 \ k10_newton \ (k12_nat_3 \ X0)) \Rightarrow (k1_funct_1 \\ X1 \ X2 = k1_newton \ X2 \ (k11_nat_3 \ X0 \ X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 \ X0) \Rightarrow (\forall X1.((v1_relat_1 \ X1) \wedge ((\\ v4_relat_1 \ X1 \ k10_newton) \wedge ((v1_funct_1 \ X1) \wedge (v1_partfun1 \ X1 \ k10_newton)))) \Rightarrow \\ ((X1 = k12_nat_3 \ X0) \Leftrightarrow (\forall X2.((v7_ordinal1 \ X2) \wedge (v1_int_2 \\ X2)) \Rightarrow (k1_funct_1 \ X1 \ X2 = k11_nat_3 \ X0 \ X2)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 \ X0) \wedge (v1_funct_1 \ X0)) \Rightarrow (\forall X1.(X1 = \\ k13_pre_poly \ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (k1_funct_1 \ X0 \ X2 \neq k6_numbers))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 \ X0) \wedge (m2_subset_1 \ X0 \ k1_numbers \ k5_numbers)) \Rightarrow \\ (\forall X1.((v7_ordinal1 \ X1) \wedge (v1_int_2 \ X1)) \Rightarrow ((\neg X1 \in k1_polynom2 \\ k10_newton \ (k13_nat_3 \ X0)) \Rightarrow (k11_nat_3 \ X0 \ X1 = k6_numbers))) \end{aligned}$$