

t65_moebius1

(TMK2ZPcmG5n6dynaSnqNKfQVhPiABaXDEm5)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_moebius1 : \iota \Rightarrow o$ be given. Let $k6_moebius1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (r1_nat_d (k6_moebius1 X0) X0) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (((r1_nat_d X0 X1) \wedge (r1_nat_d X1 X2)) \Rightarrow (r1_nat_d X0 X2)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\neg (\neg v1_moebius1 X0) \wedge ((r1_nat_d X1 X0) \wedge (v1_moebius1 X1)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow \\ & ((r1_nat_d X0 X1) \Rightarrow ((v1_moebius1 X0) \vee (r1_nat_d X0 (k6_moebius1 \\ & X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\neg v1_moebius1 (k6_moebius1 X0)) \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (m2_subset_1 (k6_moebius1 X0) k1_numbers k5_numbers) \quad (12)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Leftrightarrow (X0 \in k4_ordinal1) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (v7_ordinal1 X1)) \Rightarrow (((r1_nat_d X0 X1) \wedge (\neg v1_moebius1 \\ & X0)) \Leftrightarrow (r1_nat_d X0 (k6_moebius1 X1)))) \end{aligned}$$