

l2_nat_d (TMZ-
PaM3wmWi3KH4asSde4pgjHYgVCrkhSu)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge (\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_int_1 X0) \Rightarrow (\forall X1. (v1_int_1 X1) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (r1_xxreal_0 k6_numbers (k6_int_1 X1 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_int_1 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (X0 \in k5_numbers)) \quad (4)$$

Assume the following.

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

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

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

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (8)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (v1_int_1 (k6_int_1 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v7_ordinal1 X0) \wedge (\neg v3_xxreal_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (15)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (v7_ordinal1 (k6_int_1 X0 X1)))$$