

t13_nat_d (TMcHT-
nXS2HXprQ41ceR4FoAGFW1phjvL8N2)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xreal_0 X0 X1) \wedge (\neg v2_xreal_0 X1) \wedge (v2_xreal_0 X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (3)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k4_nat_d X0 X1 = k6_int_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k2_nat_d X0 X1 = k6_int_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (v7_ordinal1 (k3_xcmplx_0 X0 X1)) \quad (7)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{8}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 \ X0) \Rightarrow (\forall X1.(v7_ordinal1 \ X1) \Rightarrow (\forall X2. \\ (v7_ordinal1 \ X2) \Rightarrow ((X2 = k2_nat_d \ X0 \ X1) \Leftrightarrow (\neg(\forall X3.(v7_ordinal1 \\ X3) \Rightarrow (\neg(X0 = k2_xcmplx_0 \ (k3_xcmplx_0 \ X1 \ X3) \ X2) \wedge (\neg v1_xxreal_0 \\ X1 \ X2)))) \wedge (\neg(X2 = k6_numbers) \wedge (X1 = k6_numbers)))))) \end{aligned} \tag{9}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (v7_ordinal1 \ X0) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v3_xxreal_0 \ X0))) \Rightarrow ((v1_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X0)) \tag{11}$$

Assume the following.

$$\forall X0.((v1_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v3_xxreal_0 \ X0))) \tag{12}$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (v1_xcmplx_0 \ X0) \tag{13}$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v7_ordinal1 \ X0) \wedge (\neg v3_xxreal_0 \ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \tag{15}$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (v1_xreal_0 \ X0) \tag{16}$$

Theorem 1

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (\forall X1.(v7_ordinal1 \ X1) \Rightarrow (k4_nat_d \ (k3_xcmplx_0 \ X0 \ X1) \ X0 = k6_numbers))$$