

t11_pepin
(TMRd8ECMh2krEZCjFobEgBM2dyHuhQqsMod)

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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 $r1_int.2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v1_int.1 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k6_numbers = k4_nat.d k6_numbers X0) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k4_nat.d X0 X0 = k6_numbers) \quad (4)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\neg(r1_xxreal_0 X0 np_1) \wedge ((X0 \neq k6_numbers) \wedge (X0 \neq np_1))) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (k4_nat.d X0 X1 = X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((r1_int.2 X0 X0) \Leftrightarrow (X0 = np_1)) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(k4_nat_d\ (k3_xcmplx_0\ X0\ X1)\ X0 = k6_numbers)) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow(((k4_nat_d\ (k3_xcmplx_0\ X0\ X2)\ X1 = k4_nat_d\ X2\ X1)\wedge(r1_int_2\ X1\ X2))\Rightarrow((X0 = k1_xboole_0)\vee((r1_xreal_0\ X1\ np_1)\vee(k4_nat_d\ X0\ X1 = np_1)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1\ X0)\wedge(v1_int_1\ X1))\Rightarrow((r1_int_2\ X0\ X1)\Rightarrow(r1_int_2\ X1\ X0)) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0)\wedge((v1_xcmplx_0\ X0)\wedge((v1_xreal_0\ X0)\wedge(v1_xreal_0\ X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0\ X0)\wedge(v1_xcmplx_0\ X1))\Rightarrow(k3_xcmplx_0\ X0\ X1 = k3_xcmplx_0\ X1\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_int_1\ X0) \quad (16)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow(((k4_nat_d\ (k3_xcmplx_0\ X1\ X2)\ X0 = k4_nat_d\ X2\ X0)\wedge(r1_int_2\ X2\ X0))\Rightarrow((r1_xreal_0\ X0\ np_1)\vee(k4_nat_d\ X1\ X0 = np_1))))))$$