

t13_ec_pf_1

(TMNEDEpsJgu4SE9unSE4xPtjSyRKjHwzc9z)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_int_3 : \iota \Rightarrow \iota$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k6_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k7_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $k7_int_3 : \iota \Rightarrow \iota$ be given. Let $k3_gr_cy_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u3_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X1) \wedge (\neg v2_xxreal_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (((r1_xxreal_0 k6_numbers X1) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (k6_int_1 X1 X0 = X1))) \wedge ((r1_xxreal_0 (k4_xcmplx_0 X0) X1) \Rightarrow ((r1_xxreal_0 k6_numbers X1) \vee (k6_int_1 X1 X0 = k2_xcmplx_0 X0 X1)))))) \quad (2)$$

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.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \in k7_card_1 X1) \Leftrightarrow (\neg r1_xxreal_0 X1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k7_card_1\ X0 = k6_card_1\ X0) \quad (5)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (v7_ordinal1\ X1)) \Rightarrow (k4_nat_d\ X0\ X1 = k6_int_1\ X0\ X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1_funct_1 \\ & X1) \wedge ((v1_funct_2\ X1\ (k2_zfmisc_1\ X0\ X0)\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)\ X0)))))) \wedge (((v1_funct_1\ X2) \wedge \\ & (v1_funct_2\ X2\ (k2_zfmisc_1\ X0\ X0)\ X0) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)\ X0)))))) \wedge ((m1_subset_1\ X3\ X0) \wedge \\ & (m1_subset_1\ X4\ X0)))) \Rightarrow (\forall X5.\forall X6.\forall X7.\forall X8. \\ & \forall X9.(g6_algstr_0\ X0\ X1\ X2\ X3\ X4 = g6_algstr_0\ X5\ X6\ X7\ X8\ X9) \Rightarrow \\ & ((X0 = X5) \wedge ((X1 = X6) \wedge ((X2 = X7) \wedge ((X3 = X8) \wedge (X4 = X9)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0\ X0) \wedge (v7_ordinal1\ X0)) \Rightarrow ((\neg v2_struct_0 \\ (k9_int_3\ X0)) \wedge (v36_algstr_0\ (k9_int_3\ X0))) \quad (10)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (l6_algstr_0\ (k9_int_3\ X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow ((v1_funct_1\ (k7_int_3\ X0)) \wedge ((v1_funct_2 \\ & (k7_int_3\ X0)\ (k2_zfmisc_1\ (k7_card_1\ X0)\ (k7_card_1\ X0))\ (k7_card_1 \\ & X0)) \wedge (m1_subset_1\ (k7_int_3\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1 \\ & (k7_card_1\ X0)\ (k7_card_1\ X0))\ (k7_card_1\ X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (m1_subset_1\ (k7_card_1\ X0)\ (k1_zfmisc_1 \\ k4_ordinal1)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v1_funct_1\ (k3_gr_cy_1\ X0)) \wedge \\ & (v1_funct_2\ (k3_gr_cy_1\ X0)\ (k2_zfmisc_1\ (k7_card_1\ X0)\ (k7_card_1 \\ & X0))\ (k7_card_1\ X0)) \wedge (m1_subset_1\ (k3_gr_cy_1\ X0)\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (k2_zfmisc_1\ (k7_card_1\ X0)\ (k7_card_1\ X0))\ (k7_card_1 \\ & X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.m1_subset_1\ (k1_funct_7\ X0\ X1)\ X1 \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k6_card_1\ X0 = X0) \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & (k9_int_3\ X0 = g6_algstr_0\ (k7_card_1 \\ & X0)\ (k3_gr_cy_1\ X0)\ (k7_int_3\ X0)\ (k1_funct_7\ np_1\ (k7_card_1 \\ & X0))\ (k1_funct_7\ k6_numbers\ (k7_card_1\ X0))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0) \Rightarrow (v7_ordinal1\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0) \wedge (v2_xxreal_0\ X0)) \Rightarrow ((\neg v1_xboole_0\ X0) \wedge ((v1_xxreal_0\ X0) \wedge (\neg v3_xxreal_0\ X0))) \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v7_ordinal1\ X0) \wedge (\neg v3_xxreal_0\ X0)) \quad (22)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0) \wedge (v1_int_2\ X0)) \Rightarrow ((\neg v1_xboole_0\ X0) \wedge ((v7_ordinal1\ X0) \wedge (v1_int_2\ X0))) \quad (23)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (24)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_int_1\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k5_numbers)) \Rightarrow (v6_membered\ X0) \quad (27)$$

Assume the following.

$$\forall X0.(l6_algstr_0\ X0) \Rightarrow ((v36_algstr_0\ X0) \Rightarrow (X0 = g6_algstr_0\ (u1_struct_0\ X0)\ (u1_algstr_0\ X0)\ (u2_algstr_0\ X0)\ (u3_struct_0\ X0)\ (u2_struct_0\ X0))) \quad (28)$$

Theorem 1

$$\forall X0.((v7_ordinal1\ X0) \wedge (v1_int_2\ X0)) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k9_int_3\ X0))) \Rightarrow (\exists X2.(v7_ordinal1\ X2) \wedge (X1 = k4_nat_d\ X2\ X0)))$$