

t29_rcomp_3

(TMNsnv5r6u9pnF3Et1Kfa4JFHJwNMwB8S6G)

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Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_limfunc1 : \iota \Rightarrow \iota$ be given. Let $k10_prob_1 : \iota \Rightarrow \iota$ be given. Let $k2_limfunc1 : \iota \Rightarrow \iota$ be given. Let $k3_limfunc1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $v5_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $k3_seq_4 : \iota \Rightarrow \iota$ be given. Let $k2_seq_4 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow (\neg(\neg v4_xxreal_2 X0) \wedge (\neg v3_xxreal_2 X0) \wedge (X0 \neq k1_numbers)) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((v3_xxreal_2 X0) \Rightarrow ((v4_xxreal_2 X0) \vee ((k5_seq_4 X0 \in X0) \vee (X0 = k3_limfunc1 (k5_seq_4 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow (((v3_xxreal_2 X0) \wedge (k5_seq_4 X0 \in X0)) \Rightarrow ((v4_xxreal_2 X0) \vee (X0 = k2_limfunc1 (k5_seq_4 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((v4_xxreal_2 X0) \Rightarrow ((v3_xxreal_2 X0) \vee ((k4_seq_4 X0 \in X0) \vee (X0 = k10_prob_1 (k4_seq_4 X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow (((v4_xxreal_2 X0) \wedge (k4_seq_4 X0 \in X0)) \Rightarrow ((v3_xxreal_2 X0) \vee (X0 = k1_limfunc1 (k4_seq_4 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v5_xxreal_2 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))))) \Rightarrow (\neg(\neg k5_seq_4 X0 \in X0) \wedge ((\neg k4_seq_4 X0 \in X0) \wedge (X0 \neq k2_rcomp_1 (k5_seq_4 X0) (k4_seq_4 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (k1_xxreal_1 X0 X0 = k1_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0.((v5_xxreal_2 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((k5_seq_4 X0 \in X0) \Rightarrow ((k4_seq_4 X0 \in X0) \vee (X0 = k3_rcomp_1 (k5_seq_4 X0) (k4_seq_4 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.((v5_xxreal_2 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow ((k4_seq_4 X0 \in X0) \Rightarrow ((k5_seq_4 X0 \in X0) \vee (X0 = k4_rcomp_1 (k5_seq_4 X0) (k4_seq_4 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.((v5_xxreal_2 X0) \wedge ((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (((k5_seq_4 X0 \in X0) \wedge (k4_seq_4 X0 \in X0)) \Rightarrow (X0 = k1_rcomp_1 (k5_seq_4 X0) (k4_seq_4 X0))) \quad (11)$$

Assume the following.

$$\forall X0. \neg(\neg v1_xboole_0 X0) \wedge ((v1_zfmisc_1 X0) \wedge (\forall X1. X0 \neq k1_tarski X1)) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow & ((v5_xxreal_2 \\ X0) \Rightarrow & ((v1_xboole_0 X0) \vee ((\neg(\exists X1.(v1_xreal_0 X1) \wedge (\exists X2. \\ (v1_xreal_0 X2) \wedge ((X1 \in X0) \wedge ((X2 \in X0) \wedge (X2 \neq X1)))))) \wedge (r1_xxreal_0 \\ (k4_seq_4 X0) (k5_seq_4 X0))) \wedge (\neg(\neg r1_xxreal_0 (k4_seq_4 X0) (\\ k5_seq_4 X0)) \wedge (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 \\ X2) \Rightarrow (\neg(X1 \in X0) \wedge ((X2 \in X0) \wedge (X2 \neq X1)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k5_seq_4 X0 = k3_seq_4 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k4_seq_4 X0 = k2_seq_4 X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (17)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v1_xreal_0 (k3_seq_4 X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v1_xreal_0 (k2_seq_4 X0)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarSKI X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_zfmisc_1 X0) \Leftrightarrow (\forall X1.\forall X2.((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow (X1 = X2)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered X0) \quad (23)$$

Assume the following.

$$\forall X0.((v2_membered X0) \wedge ((v3_xxreal_2 X0) \wedge (v4_xxreal_2 X0))) \Rightarrow ((v2_membered X0) \wedge (v5_xxreal_2 X0)) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v2_membered X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (27)$$

Theorem 1

$$\begin{aligned} \forall X0.((v6_xxreal_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow \\ (\neg(\neg v1_xboole_0 X0) \wedge ((X0 \neq k1_numbers) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (X0 \neq k1_limfunc1 X1)) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (X0 \neq k10_prob_1 X1)) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (X0 \neq k2_limfunc1 X1)) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (X0 \neq k3_limfunc1 X1)) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(r1_xxreal_0 X1 X2) \wedge (X0 = k1_rcomp_1 X1 X2)))) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X1) \wedge (X0 = k3_rcomp_1 X1 X2)))) \wedge ((\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X1) \wedge (X0 = k4_rcomp_1 X1 X2)))) \wedge (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X1) \wedge (X0 = k2_rcomp_1 X1 X2)))))))))))))) \end{aligned}$$