

t36_rat_1 (TMTcTqaNL-
VawKN9eiLSMcXnBPpPPKYAs2jM)

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Let $v1_rat_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k2_rat_1 : \iota \Rightarrow \iota$ be given. Let $k1_rat_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((\neg(\neg r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 (k1_rat_1 X0) (k2_rat_1 X0))) \wedge (\neg(\neg r1_xxreal_0 (k1_rat_1 X0) (k2_rat_1 X0)) \wedge (r1_xxreal_0 np_1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((k2_rat_1 X0 = k1_rat_1 X0) \Leftrightarrow (X0 = np_1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1) \wedge (v3_ordinal1\ k4_ordinal1) \quad (7)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (8)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v1_rat_1\ X0) \Rightarrow (v1_int_1\ (k2_rat_1\ X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_rat_1\ X0) \Rightarrow (m2_subset_1\ (k1_rat_1\ X0)\ k1_numbers\ k5_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (r1_xxreal_0\ X0\ X1) \vee (r1_xxreal_0\ X1\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_int_1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_rat_1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (17)$$

Theorem 1

$$\forall X0.(v1_rat_1\ X0) \Rightarrow ((r1_xxreal_0\ X0\ np_1) \Leftrightarrow (r1_xxreal_0\ (k2_rat_1\ X0)\ (k1_rat_1\ X0)))$$