

t227_xreal_1

(TMLHb8mAewtosrkyqFYKuvNhgk8z4GxNrZG)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_xreal_0 : \iota$ be given. Let $k2_xreal_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(X0 \in k1_numbers) \wedge (r1_xreal_0 k1_xreal_0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xreal_0 k2_xreal_0 X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xreal_0 X1 X0) \wedge (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xreal_0 X2 X0) \wedge (\neg r1_xreal_0 X1 X2))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xreal_0 X0 k1_xreal_0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg \forall X1.(v1_xreal_0 X1) \Rightarrow (r1_xreal_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg \forall X1.(v1_xreal_0 X1) \Rightarrow (r1_xreal_0 X1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(\neg X0 \in k1_numbers) \wedge ((X0 \neq k1_xxreal_0) \wedge (X0 \neq k2_xxreal_0))) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(X0 \in k1_numbers) \wedge (r1_xxreal_0 X0 k2_xxreal_0)) \quad (9)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (13)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xxreal_0 X0) \quad (15)$$

Theorem 1

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X1 X0) \wedge (\forall X2.(v1_xxreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X0) \wedge (\neg r1_xxreal_0 X1 X2)))))$$