

t15_xxreal_2
(TMH3aRp1WyZSEPrFtGQck3ov5VGpNFfQLZY)

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Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $m2_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v3_membered X0)) \Rightarrow (\exists X1. (v1_xreal_0 X1) \wedge (X1 \in X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow (((X0 \in k1_numbers) \wedge ((X1 \in k1_numbers) \wedge ((r1_xxreal_0 X0 X2) \wedge (r1_xxreal_0 X2 X1)))) \Rightarrow (X2 \in k1_numbers)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow ((X0 \in X1) \Rightarrow (r1_xxreal_0 (k2_xxreal_2 X1) X0))) \quad (3)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (v1_xxreal_0 (k2_xxreal_2 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow ((v3_xxreal_2 X0) \Leftrightarrow (\exists X1.(v1_xreal_0 X1) \wedge (m2_xxreal_2 X1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((X1 = k2_xxreal_2 X0) \Leftrightarrow ((m2_xxreal_2 X1 X0) \wedge (\forall X2.(m2_xxreal_2 X2 X0) \Rightarrow (r1_xxreal_0 X2 X1)))))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v2_membered X0) \quad (9)$$

Theorem 1

$$\forall X0.((v3_membered X0) \wedge (\neg v1_xboole_0 X0)) \Rightarrow ((v3_xxreal_2 X0) \Rightarrow (k2_xxreal_2 X0 \in k1_numbers))$$