

t66_xxreal_2

(TMZ1D4ExTHiXxy7x8sCQixwVPm4bZJzNi5E)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $m2_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (\forall X2.(m2_xxreal_2 X2 X1) \Rightarrow (m2_xxreal_2 X2 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (v2_membered X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski (k3_xboole_0 X0 X1) X0 \quad (3)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m2_xxreal_2 X1 X0) \Rightarrow (v1_xxreal_0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X1 X0) \Rightarrow (k4_xxreal_0 X0 X1 = X0)) \wedge ((\neg r1_xxreal_0 X1 X0) \Rightarrow (k4_xxreal_0 X0 X1 = X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (6)$$

Theorem 1

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow (\forall X2.(m2_xxreal_2 X2 X0) \Rightarrow (\forall X3.(m2_xxreal_2 X3 X1) \Rightarrow (m2_xxreal_2 (k4_xxreal_0 X2 X3) (k3_xboole_0 X0 X1))))))$$