

t58_xxreal_2 (TMFfRwQuKCWBxtcQBECHa- JnS2GQBqphcGuK)

October 27, 2020

Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(X0 \in k1_numbers) \wedge (r1_xxreal_0 k1_xxreal_0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.((v2_membered X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v3_xxreal_2 X0))) \Rightarrow (\neg(X0 \neq k1_tarski k1_xxreal_0) \wedge (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\neg X1 \in X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\neg(X0 \in k1_numbers) \wedge ((r1_xxreal_0 X0 X1) \wedge ((\neg X1 \in k1_numbers) \wedge (X1 \neq k1_xxreal_0)))))) \quad (3)$$

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.

$$\forall X0.(v2_membered X0) \Rightarrow (v1_xxreal_0 (k2_xxreal_2 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow ((v3_xxreal_2 X0) \Leftrightarrow (\exists X1.(v1_xreal_0 X1) \wedge (m2_xxreal_2 X1 X0))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow ((\\ X1 = k2_xxreal_2\ X0) \Leftrightarrow ((m2_xxreal_2\ X1\ X0) \wedge (\forall X2.(m2_xxreal_2\ X2\ X0) \Rightarrow (r1_xxreal_0\ X2\ X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow ((\\ m2_xxreal_2\ X1\ X0) \Leftrightarrow (\forall X2.(v1_xxreal_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0\ X1\ X2))))) \end{aligned} \quad (8)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Leftrightarrow (X0 \in k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0.((v2_membered\ X0) \wedge (\neg v1_xboole_0\ X0)) \Rightarrow ((v3_xxreal_2\ X0) \Rightarrow ((X0 = k1_tarski\ k1_xxreal_0) \vee (k2_xxreal_2\ X0 \in k1_numbers))) \end{aligned}$$