

t231_xxreal_1
(TMUx4cqyb4mdG9LuhayqZCNpiAvCF19mj65)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k3_xxreal_1 X1 X2) \Leftrightarrow ((\neg r1_xxreal_0 X0 X1) \wedge \\ & (r1_xxreal_0 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(X0 \in k1_numbers) \wedge (r1_xxreal_0 X0 k2_xxreal_0)) \tag{3}$$

Assume the following.

$$v1_xxreal_0 k2_xxreal_0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v3_membered (k3_xxreal_1 X1 X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarSKI X0 X1) \wedge (r1_tarSKI X1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow & (k3_xxreal_1 k2_xxreal_0 X0 = ReplSep \\ & (toSet (\lambda X1 : \iota.m1_subset_1 X1 k1_numbers)) (\lambda X1 : \iota. \\ & r1_xxreal_0 X1 X0) (\lambda X1 : \iota.X1)) \end{aligned}$$