

t227\_xxreal\_1 (TMZZ-  
jAYnv6VA8WYNtWgUNCHmpNdT7PKuTGF)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (((X0 \in k1\_numbers) \wedge (r1\_xxreal\_0 X2 X0)) \Rightarrow (( \\ & r1\_xxreal\_0 X2 X1) \vee (X2 \in k1\_numbers)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (v2\_membered (k3\_xxreal\_1 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v2\_membered X0) \Rightarrow (\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (v1\_xxreal\_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (k3\_xxreal\_1 \\ & X0 X1 = ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 X2 k7\_numbers)) \\ & (\lambda X2 : \iota.(\neg r1\_xxreal\_0 X2 X0) \wedge (r1\_xxreal\_0 X2 X1)) (\lambda X2 : \\ & \iota.X2))) \end{aligned} \quad (4)$$

**Theorem 1**

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((X0 \in k1\_numbers) \Rightarrow (r1\_tarski (k3\_xxreal\_1 X1 X0) k1\_numbers)))$$