t26_urysohn2 (TMQ4WTuHUAL5b7zq2op3ZEyWD7Ms87kuAj9)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_numbers : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_supinf\_2 : \iota \Rightarrow \iota$ be given. Let $k8\_supinf\_2 : \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v2\_membered : \iota \Rightarrow o$ be given. Let $k1\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $m2\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((X0 \in k1\_xxreal\_1\ X1\ X2) \Leftrightarrow ((r1\_xxreal\_0\ X1\ X0) \wedge (r1\_xxreal\_0\ X0\ X2))))) \tag{5}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (k8\_supinf\_2\ X0 = k1\_xxreal\_2\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (k7\_supinf\_2\ X0 = k2\_xxreal\_2\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (v1\_xxreal\_0\ (k2\_xxreal\_2\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (v1\_xxreal\_0\ (k1\_xxreal\_2\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((X1 = k2\_xxreal\_2\ X0) \Leftrightarrow ((m2\_xxreal\_2\ X1\ X0) \wedge (\forall X2.(m2\_xxreal\_2\ X2\ X0) \Rightarrow (r1\_xxreal\_0\ X2\ X1))))) \tag{10}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((X1 = k1\_xxreal\_2\ X0) \Leftrightarrow ((m1\_xxreal\_2\ X1\ X0) \wedge (\forall X2.(m1\_xxreal\_2\ X2\ X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2))))) \tag{11}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((m2\_xxreal\_2\ X1\ X0) \Leftrightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2))))) \tag{12}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow ((m1\_xxreal\_2\ X1\ X0) \Leftrightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0\ X2\ X1))))) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k7\_numbers)) \Rightarrow (v2\_membered\ X0) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow (v1\_xxreal\_0\ X0) \tag{15}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k7\_numbers))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k7\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k7\_numbers) \Rightarrow ((r1\_tarski\ X0\ (k1\_xxreal\_1\ X1\ X2)) \Rightarrow ((r1\_xxreal\_0\ X1\ (k7\_supinf\_2\ X0)) \wedge (r1\_xxreal\_0\ (k8\_supinf\_2\ X0)\ X2)))))$$