

t161_xxreal_1 (TMP-
TQAVJ4DqnfsJcXCryhBLyYB9p58Au6sD)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X2 X1)) \Rightarrow (r1_tarski (k2_xboole_0 X0 X2) X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow (\forall X3. (v1_xxreal_0 X3) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X2 X3)) \Rightarrow (r1_tarski (k2_xxreal_1 X1 X2) (k2_xxreal_1 X0 X3))))))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (r1_xxreal_0 X0 (k4_xxreal_0 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (r1_xxreal_0 (k3_xxreal_0 X0 X1) X0)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v1_xxreal_0 (k3_xxreal_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k4_xxreal_0 X0 X1 = k4_xxreal_0 X1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k3_xxreal_0 X0 X1 = k3_xxreal_0 X1 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2. \\ &(v1_xxreal_0 X2)\Rightarrow(\forall X3.(v1_xxreal_0 X3)\Rightarrow(r1_tarski (k2_xboole_0 \\ &(k2_xxreal_1 X0 X1) (k2_xxreal_1 X2 X3)) (k2_xxreal_1 (k3_xxreal_0 \\ &X0 X2) (k4_xxreal_0 X1 X3)))))) \end{aligned}$$