

t177_xxreal_1 (TMFhA-
jth7aNHews65eTmTY2P6UD2CXx9zsg)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 (k2_xboole_0 X0 X1) = k2_xboole_0 X0 X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k2_xboole_0 (k2_xboole_0 X0 X1) X2 = k2_xboole_0 X0 (k2_xboole_0 X1 X2) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow (r1_xxreal_0 X0 X2)))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow (k2_xboole_0 (k3_xxreal_1 X0 X1) (k3_xxreal_1 X1 X2) = k3_xxreal_1 X0 X2)))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (k3_xxreal_1 X0 X1 = k2_xboole_0 (k4_xxreal_1 X0 X1) (k1_tarski X1)))) \quad (5)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k1_xxreal_1 X0 X1 = k2_xboole_0 (k1_tarski X0) (k3_xxreal_1 X0 X1)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (8)$$

Theorem 1

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2. (v1_xxreal_0 X2)\Rightarrow(\forall X3.(v1_xxreal_0 X3)\Rightarrow(((r1_xxreal_0 X2 X3)\wedge(r1_xxreal_0 X1 X2))\Rightarrow((r1_xxreal_0 X1 X0)\vee(k2_xboole_0 (k3_xxreal_1 X0 X2) (k1_xxreal_1 X1 X3) = k3_xxreal_1 X0 X3)))))))$$