

t11_brouwer

(TMRc9bgGJEBSjkgkEjEEJVgGARAN9uJJQSs)

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Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k2_brouwer : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_toprealb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_abian : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_brouwer : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_brouwer : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v3_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow (\forall X1. \\
& ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 (k15_euclid X1))) \Rightarrow (\forall X3. (\\
& m1_subset_1 X3 (u1_struct_0 (k2_brouwer X1 X2 X0))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 (k2_brouwer X1 \\
& X2 X0)) (u1_struct_0 (k2_brouwer X1 X2 X0))) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 (k2_brouwer X1 X2 X0)) (u1_struct_0 \\
& (k2_brouwer X1 X2 X0)))))) \Rightarrow ((m1_subset_1 X3 (u1_struct_0 (k7_toprealb \\
& X1 X2 X0))) \Rightarrow ((r2_abian (u1_struct_0 (k2_brouwer X1 X2 X0)) X3 X4) \vee \\
& (k4_brouwer X1 X2 X0 X3 X4 = X3))))))
\end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\
& X0)\wedge(m1_subset_1 X0 k5_numbers))\wedge(((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 \\
& X1))\wedge((m1_subset_1 X2 (u1_struct_0 (k15_euclid X0)))\wedge((v1_funct_1 \\
& X3)\wedge((v1_funct_2 X3 (u1_struct_0 (k2_brouwer X0 X2 X1)) (u1_struct_0 \\
& (k2_brouwer X0 X2 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 (k2_brouwer X0 X2 X1)) (u1_struct_0 (k2_brouwer X0 \\
& X2 X1))))))\Rightarrow((v1_funct_1 (k5_brouwer X0 X1 X2 X3))\wedge((v1_funct_2 \\
& (k5_brouwer X0 X1 X2 X3) (u1_struct_0 (k2_brouwer X0 X2 X1)) (u1_struct_0 \\
& (k7_toprealb X0 X2 X1)))\wedge(m1_subset_1 (k5_brouwer X0 X1 X2 X3) (\\
& k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_brouwer X0 X2 X1)) (\\
& u1_struct_0 (k7_toprealb X0 X2 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X0 k5_numbers))\Rightarrow \\
& (\forall X1.((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1))\Rightarrow(\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 (k15_euclid X0)))\Rightarrow(\forall X3.(\\
& (v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 (k2_brouwer X0 X2 \\
& X1)) (u1_struct_0 (k2_brouwer X0 X2 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 (k2_brouwer X0 X2 X1)) (u1_struct_0 \\
& (k2_brouwer X0 X2 X1))))))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 \\
& X4 (u1_struct_0 (k2_brouwer X0 X2 X1)) (u1_struct_0 (k7_toprealb \\
& X0 X2 X1)))\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& (k2_brouwer X0 X2 X1)) (u1_struct_0 (k7_toprealb X0 X2 X1))))))\Rightarrow \\
& ((X4 = k5_brouwer X0 X1 X2 X3)\Leftrightarrow(\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& (k2_brouwer X0 X2 X1)))\Rightarrow(k3_funct_2 (u1_struct_0 (k2_brouwer \\
& X0 X2 X1)) (u1_struct_0 (k7_toprealb X0 X2 X1)) X4 X5 = k4_brouwer \\
& X0 X2 X1 X5 X3))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\Rightarrow(\forall X1. \\
& ((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 (k15_euclid X1)))\Rightarrow(\forall X3.(\\
& m1_subset_1 X3 (u1_struct_0 (k2_brouwer X1 X2 X0)))\Rightarrow(\forall X4. \\
& ((v1_funct_1 X4)\wedge((v1_funct_2 X4 (u1_struct_0 (k2_brouwer X1 \\
& X2 X0)) (u1_struct_0 (k2_brouwer X1 X2 X0)))\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 (k2_brouwer X1 X2 X0)) (u1_struct_0 \\
& (k2_brouwer X1 X2 X0))))))\Rightarrow((m1_subset_1 X3 (u1_struct_0 (k7_toprealb \\
& X1 X2 X0)))\Rightarrow((r2_abian (u1_struct_0 (k2_brouwer X1 X2 X0)) X3 X4)\vee \\
& (k3_funct_2 (u1_struct_0 (k2_brouwer X1 X2 X0)) (u1_struct_0 (\\
& k7_toprealb X1 X2 X0)) (k5_brouwer X1 X0 X2 X4) X3 = X3))))))
\end{aligned}$$