

t19_topreala (TMJZvYHspKt- fYsko99N1SvhyAXzRaeW1MW)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_topmetr : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (((v3_pre_topc \\ X1 X0) \wedge (X2 \in X1)) \Rightarrow (m1_connsp_2 X1 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k3_topmetr))) \Rightarrow \\ (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow ((X0 = \\ k2_rcomp_1 X1 X2) \Rightarrow (v3_pre_topc X0 k3_topmetr)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow ((\neg r1_xxreal_0 \\ X1 k6_numbers) \Rightarrow (X0 \in k2_rcomp_1 (k6_xcmplx_0 X0 X1) (k2_xcmplx_0 \\ X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 \\ (k6_xcmplx_0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 \\ (k2_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$(v2_pre_topc\ k3_topmetr)\wedge(v3_topmetr\ k3_topmetr) \quad (6)$$

Assume the following.

$$\forall X0.((v3_topmetr\ X0)\wedge(l1_struct_0\ X0))\Rightarrow(v3_membered\ (u1_struct_0\ X0)) \quad (7)$$

Assume the following.

$$(\neg v2_struct_0\ k3_topmetr)\wedge((v1_pre_topc\ k3_topmetr)\wedge(v2_pre_topc\ k3_topmetr)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (9)$$

Assume the following.

$$(v2_pre_topc\ k3_topmetr)\wedge(l1_pre_topc\ k3_topmetr) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ k1_numbers))\Rightarrow((m1_rcomp_1\ X1\ X0)\Leftrightarrow(\exists X2.(v1_xreal_0\ X2)\wedge \\ ((\neg r1_xreal_0\ X2\ k6_numbers)\wedge(X1 = k2_rcomp_1\ (k6_xcmplx_0\ X0\ X2)\ (k2_xcmplx_0\ X0\ X2)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ (u1_struct_0\ k3_topmetr))\Rightarrow(\forall X1. \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ k3_topmetr)))\Rightarrow(((X2 = X1)\wedge(m1_rcomp_1\ X1\ X0))\Rightarrow(m1_connsp_2\ X2\ k3_topmetr\ X0)))) \end{aligned}$$