t11_grcat_1 (TML1vxv9yrPEbg19LvfmVZ2L59ctcd1F7pt)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v13\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_grcat\_1 : \iota \Rightarrow o$ be given. Let $g1\_grcat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_grcat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_grcat\_1 : \iota \Rightarrow o$ be given. Let $k7\_grcat\_1 : \iota \Rightarrow \iota$ be given. Let $k8\_grcat\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_grcat\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_grcat\_1 : \iota \Rightarrow \iota$ be given. Let $u3\_grcat\_1 : \iota \Rightarrow \iota$ be given. Let $u2\_grcat\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l2\_algstr\_0\ X0))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge (l2\_algstr\_0\ X1))))) \Rightarrow (\forall X2.((v1\_grcat\_1\ X2) \wedge (l1\_grcat\_1\ X2)) \Rightarrow (((k7\_grcat\_1\ X2 = X0) \wedge ((k8\_grcat\_1\ X2 = X1) \wedge (v13\_vectsp\_1\ (k9\_grcat\_1\ X2)\ (k7\_grcat\_1\ X2)\ (k8\_grcat\_1\ X2)))) \Rightarrow ((v1\_grcat\_1\ X2) \wedge (m1\_grcat\_1\ X2\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l2\_algstr\_0\ X0))))) \wedge (((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge (l2\_algstr\_0\ X1))))) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))) \Rightarrow (\forall X3.\forall X4.\forall X5.(g1\_grcat\_1\ X0\ X1\ X2 = g1\_grcat\_1\ X3\ X4\ X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l2\_algstr\_0\ X0)))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l2\_algstr\_0\ X1)))))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))))\Rightarrow((v1\_grcat\_1\ (g1\_grcat\_1\ X0\ X1\ X2))\wedge(l1\_grcat\_1\ (g1\_grcat\_1\ X0\ X1\ X2))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_grcat\_1\ X0)\Rightarrow(k7\_grcat\_1\ X0 = u1\_grcat\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_grcat\_1\ X0)\Rightarrow(k9\_grcat\_1\ X0 = u3\_grcat\_1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_grcat\_1\ X0)\Rightarrow(k8\_grcat\_1\ X0 = u2\_grcat\_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_grcat\_1\ X0)\Rightarrow((v1\_grcat\_1\ X0)\Rightarrow(X0 = g1\_grcat\_1\ (u1\_grcat\_1\ X0)\ (u2\_grcat\_1\ X0)\ (u3\_grcat\_1\ X0))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l2\_algstr\_0\ X0)))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l2\_algstr\_0\ X1)))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((v13\_vectsp\_1\ X2\ X0\ X1)\Rightarrow((v1\_grcat\_1\ (g1\_grcat\_1\ X0\ X1\ X2))\wedge(m1\_grcat\_1\ (g1\_grcat\_1\ X0\ X1\ X2)\ X0\ X1)))))$$