t22_topalg_3 (TMP54MbcKHM6T6SpzET2Tvw5SHP2Lm6wXkN)

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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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ 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 $k5\_topmetr : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\exists X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0)))))) \wedge ((v5\_pre\_topc\ X2\ k5\_topmetr\ X0) \wedge ((k1\_funct\_1\ X2\ k6\_numbers = X1) \wedge (k1\_funct\_1\ X2\ np\_\_1 = X1))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_pre\_topc\ X0) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (\forall X3.(m1\_borsuk\_2\ X3\ X0\ X1\ X2) \Rightarrow ((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0))))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_borsuk\_2\ X0\ X1\ X2) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0)))))) \Rightarrow ((m1\_borsuk\_2\ X3\ X0\ X1\ X2) \Leftrightarrow ((v5\_pre\_topc\ X3\ k5\_topmetr\ X0) \wedge ((k1\_funct\_1\ X3\ k6\_numbers = X1) \wedge (k1\_funct\_1\ X3\ np\_\_1 = X2)))))))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_borsuk\_2\ X0\ X1\ X2)\Leftrightarrow(\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ X0))))))\wedge((v5\_pre\_topc\ X3\ k5\_topmetr\ X0)\wedge((k1\_funct\_1\ X3\ k6\_numbers = X1)\wedge(k1\_funct\_1\ X3\ np\_\_1 = X2))))))) \tag{4}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_borsuk\_2\ X2\ X0\ X1\ X1)\Rightarrow((k1\_funct\_1\ X2\ k6\_numbers = X1)\wedge(k1\_funct\_1\ X2\ np\_\_1 = X1))))$$