t28_topalg_1 (TMTMh-BeXJXQqMXGg6SGmy4DV6MRhuXCFCs6)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. Let $v1\_borsuk\_2 : \iota \Rightarrow o$ 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 $r4\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_borsuk\_6\ X0\ X1\ X2) \wedge (r1\_borsuk\_6\ X0\ X3\ X2)) \Rightarrow (\forall X4.(m1\_borsuk\_2\ X4\ X0\ X1\ X2) \Rightarrow (\forall X5.(m1\_borsuk\_2\ X5\ X0\ X1\ X2) \Rightarrow (\forall X6.(m1\_borsuk\_2\ X6\ X0\ X2\ X3) \Rightarrow ((r3\_borsuk\_2\ X0\ X1\ X3\ (k1\_borsuk\_2\ X0\ X1\ X2\ X3\ X4\ X6)\ (k1\_borsuk\_2\ X0\ X1\ X2\ X3\ X5\ X6)) \Rightarrow (r3\_borsuk\_2\ X0\ X1\ X2\ X4\ X5)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge ((v1\_borsuk\_2\ X0) \wedge (l1\_pre\_topc\ X0)))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge ((m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \wedge ((m1\_borsuk\_2\ X3\ X0\ X1\ X2) \wedge (m1\_borsuk\_2\ X4\ X0\ X1\ X2))))) \Rightarrow ((r4\_borsuk\_2\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (r3\_borsuk\_2\ X0\ X1\ X2\ X3\ X4)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow ((r1\_borsuk\_6\ X0\ X1\ X2) \Leftrightarrow (r1\_borsuk\_2\ X0\ X1\ X2)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\\ (((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\wedge(\\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge((m1\_subset\_1\ X2\ (u1\_struct\_0\\ X0))\wedge((m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\wedge((m1\_borsuk\_2\ X4\ X0\ X1\\ X2)\wedge(m1\_borsuk\_2\ X5\ X0\ X2\ X3))))))\Rightarrow(m1\_borsuk\_2\ (k1\_borsuk\_2\\ X0\ X1\ X2\ X3\ X4\ X5)\ X0\ X1\ X3) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow((v1\_borsuk\_2\ X0)\Leftrightarrow(\forall X1.(\\ m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\\ (u1\_struct\_0\ X0))\Rightarrow(r1\_borsuk\_2\ X0\ X1\ X2)))) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge((v1\_borsuk\_2\\ X0)\wedge(l1\_pre\_topc\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.\\ (m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_borsuk\_2\ X4\\ X0\ X1\ X2)\Rightarrow(\forall X5.(m1\_borsuk\_2\ X5\ X0\ X1\ X2)\Rightarrow(\forall X6.(m1\_borsuk\_2\\ X6\ X0\ X2\ X3)\Rightarrow((r4\_borsuk\_2\ X0\ X1\ X3\ (k1\_borsuk\_2\ X0\ X1\ X2\ X3\ X4\ X6)\ (\\ k1\_borsuk\_2\ X0\ X1\ X2\ X3\ X5\ X6))\Rightarrow(r4\_borsuk\_2\ X0\ X1\ X2\ X4\ X5))))))))$$