

## t19\_topalg\_5

(TMHw7M2eeup8qAnLWch6q7WCDFNbaMZxUxy)

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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  $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_topalg\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_borsuk\_1 : \iota$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$k5\_topmetr = k17\_borsuk\_1 \tag{1}$$

Assume the following.

$$(\neg v2\_struct\_0\ k17\_borsuk\_1) \wedge ((v1\_pre\_topc\ k17\_borsuk\_1) \wedge (v2\_pre\_topc\ k17\_borsuk\_1)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0 \\ & X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \wedge (((\neg v2\_struct\_0\ X1) \wedge \\ & ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \wedge (((\neg v2\_struct\_0\ X2) \wedge \\ & (v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc\ X2))) \wedge (((v1\_funct\_1\ X3) \wedge (v1\_funct\_2 \\ & X3\ (u1\_struct\_0\ (k2\_borsuk\_1\ X0\ X1))\ (u1\_struct\_0\ X2)) \wedge ((v5\_pre\_topc \\ & X3\ (k2\_borsuk\_1\ X0\ X1)\ X2) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & (u1\_struct\_0\ (k2\_borsuk\_1\ X0\ X1))\ (u1\_struct\_0\ X2)))))) \wedge (m1\_subset\_1 \\ & X4\ (u1\_struct\_0\ X0)))))) \Rightarrow ((v1\_funct\_1\ (k4\_topalg\_5\ X0\ X1\ X2\ X3 \\ & X4) \wedge ((v1\_funct\_2\ (k4\_topalg\_5\ X0\ X1\ X2\ X3\ X4)\ (u1\_struct\_0\ X1) \\ & (u1\_struct\_0\ X2)) \wedge (v5\_pre\_topc\ (k4\_topalg\_5\ X0\ X1\ X2\ X3\ X4)\ X1\ X2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0 \\ & X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\wedge((m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 X0))\wedge((m1\_borsuk\_2 \\ & X3 X0 X1 X2)\wedge(m1\_borsuk\_2 X4 X0 X1 X2))))))\Rightarrow(\forall X5.(m1\_borsuk\_6 \\ & X5 X0 X1 X2 X3 X4)\Rightarrow((v1\_funct\_1 X5)\wedge((v1\_funct\_2 X5 (u1\_struct\_0 \\ & (k2\_borsuk\_1 k5\_topmetr k5\_topmetr)) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 \\ & X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k2\_borsuk\_1 k5\_topmetr \\ & k5\_topmetr)) (u1\_struct\_0 X0))))))) \end{aligned} \quad (4)$$

Assume the following.

$$l1\_pre\_topc k17\_borsuk\_1 \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc \\ & X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.(m1\_borsuk\_2 X3 \\ & X0 X1 X2)\Rightarrow(\forall X4.(m1\_borsuk\_2 X4 X0 X1 X2)\Rightarrow(\forall X5.(m1\_borsuk\_6 \\ & X5 X0 X1 X2 X3 X4)\Rightarrow(\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 k5\_topmetr))\Rightarrow \\ & ((v5\_pre\_topc X5 (k2\_borsuk\_1 k5\_topmetr k5\_topmetr) X0)\Rightarrow(v5\_pre\_topc \\ & (k4\_topalg\_5 k5\_topmetr k5\_topmetr X0 X5 X6) k5\_topmetr X0)))))))))) \end{aligned}$$