t19_borsuk_3 (TMFyepSiqEPWtCN-NrF8KLHuvfu6DSHABZLJ)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. Let $v1\_compts\_1 : \iota \Rightarrow o$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $k3\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge ((v1\_compts\_1\ X0) \wedge (l1\_pre\_topc\ X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge ((v1\_compts\_1\ X1) \wedge (l1\_pre\_topc\ X1)))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0))))) \Rightarrow (((m1\_setfam\_1\ X3\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0))) \wedge ((v1\_tops\_2\ X3\ (k2\_borsuk\_1\ X1\ X0)) \wedge (X2 = ReplSep\ (toset\ (\lambda X4 : \iota.(v3\_pre\_topc\ X4\ X0) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))))\ (\lambda X4 : \iota.\exists X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0))))) \wedge ((r1\_tarski\ X5\ X3) \wedge ((v1\_finset\_1\ X5) \wedge (r1\_tarski\ (k3\_borsuk\_1\ X1\ X0\ (k2\_struct\_0\ X1)\ X4)\ (k5\_setfam\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0))\ X5))))))\ (\lambda X4 : \iota.X4)))) \Rightarrow ((v1\_tops\_2\ X2\ X0) \wedge (m1\_setfam\_1\ X2\ (u1\_struct\_0\ X0)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow ((v1\_compts\_1\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\neg(m1\_setfam\_1\ X1\ (u1\_struct\_0\ X0)) \wedge ((v1\_tops\_2\ X1\ X0) \wedge (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\neg(r1\_tarski\ X2\ X1) \wedge ((m1\_setfam\_1\ X2\ (u1\_struct\_0\ X0)) \wedge (v1\_finset\_1\ X2)))))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge((v1\_compts\_1\ X0)\wedge(l1\_pre\_topc\ X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge((v1\_compts\_1\ X1)\wedge(l1\_pre\_topc\ X1))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0)))))\Rightarrow(\neg(m1\_setfam\_1\ X3\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0)))\wedge((v1\_tops\_2\ X3\ (k2\_borsuk\_1\ X1\ X0))\wedge((X2 = ReplSep\ (toset\ (\lambda X4 : \iota.(v3\_pre\_topc\ X4\ X0)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\ (\lambda X4 : \iota.\exists X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0)))))\wedge((r1\_tarski\ X5\ X3)\wedge((v1\_finset\_1\ X5)\wedge(r1\_tarski\ (k3\_borsuk\_1\ X1\ X0\ (k2\_struct\_0\ X1)\ X4)\ (k5\_setfam\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ X1\ X0))\ X5)))))\ (\lambda X4 : \iota.X4))\wedge(\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow(\neg(r1\_tarski\ X4\ X2)\wedge((v1\_finset\_1\ X4)\wedge(m1\_setfam\_1\ X4\ (u1\_struct\_0\ X0))))))))))))$$