# t24_supinf_2 (TMdw-BvE8mck1CzjXVTs3BserDPTwyQG68My)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_numbers : \iota$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_supinf\_2 : \iota \Rightarrow \iota$ be given. Let $v2\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \Rightarrow ((v2\_supinf\_2\ X2\ X0\ X1) \Leftrightarrow (v1\_supinf\_2\ (k14\_supinf\_2\ X0\ X1\ X2)\ X0\ (k6\_supinf\_2\ X1)))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \Rightarrow ((v1\_supinf\_2\ X2\ X0\ X1) \Leftrightarrow (v2\_supinf\_2\ (k14\_supinf\_2\ X0\ X1\ X2)\ X0\ (k6\_supinf\_2\ X1)))))) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k7\_numbers)) \Rightarrow (m1\_subset\_1\ (k6\_supinf\_2\ X0)\ (k1\_zfmisc\_1\ k7\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers))) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))) \Rightarrow ((v1\_funct\_1\ (k14\_supinf\_2\ X0\ X1\ X2)) \wedge ((v1\_funct\_2\ (k14\_supinf\_2\ X0\ X1\ X2)\ X0\ (k6\_supinf\_2\ X1)) \wedge (m1\_subset\_1\ (k14\_supinf\_2\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ (k6\_supinf\_2\ X1))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow (((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge((v1\_supinf\_2\ X2\ X0\ X1)\wedge (v2\_supinf\_2\ X2\ X0\ X1))))\Rightarrow((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(v3\_supinf\_2\ X2\ X0\ X1)))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow (((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(v3\_supinf\_2\ X2\ X0\ X1)))\Rightarrow ((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge((v1\_supinf\_2\ X2\ X0\ X1)\wedge (v2\_supinf\_2\ X2\ X0\ X1)))))) \tag{6}$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k7\_numbers)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v3\_supinf\_2\ X2\ X0\ X1)\Leftrightarrow(v3\_supinf\_2\ (k14\_supinf\_2\ X0\ X1\ X2)\ X0\ (k6\_supinf\_2\ X1)))))$$