

## l2\_frechet2

(TMHGbzmf62pUCfneLgu216aN3BNpNb7LaRc)

October 27, 2020

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  $v7\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (r1\_tarski X1 (k2\_pre\_topc X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow ((\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k2\_pre\_topc X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1) = k6\_domain\_1 (u1\_struct\_0 X0) X1)) \Rightarrow (v7\_pre\_topc X0)) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow (m1\_subset\_1 (k6\_domain\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((l1\_pre\_topc X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow(m1\_subset\_1 (k2\_pre\_topc X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarSKI X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow (X2 = X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1\_tarSKI X0 X1)\wedge(r1\_tarSKI X1 X0)) \quad (11)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\Rightarrow(\neg(\neg v7\_pre\_topc X0)\wedge(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\neg(X1\neq X2)\wedge (X2 \in k2\_pre\_topc X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1))))))$$