

## t20\_frechet

(TMb8Z2hWPt3PMBwd2XZPwZKKJFnpKrJahgb)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v7\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v8\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v9\_metric\_1 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v1\_frechet : \iota \Rightarrow o$  be given. Let  $k3\_pcomps\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_card\_3 : \iota \Rightarrow o$  be given. Let  $k1\_frechet : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_yellow\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_metric\_1 X0)) \Rightarrow (\neg v2\_struct\_0 (k3\_pcomps\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 (k3\_pcomps\_1 X0)))) \Rightarrow (v4\_card\_3 (k1\_frechet X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 (k3\_pcomps\_1 X0)))) \Rightarrow ((v1\_tops\_2 (k1\_frechet X0 X1) (k3\_pcomps\_1 X0)) \wedge (v1\_yellow\_8 (k1\_frechet X0 X1) (k3\_pcomps\_1 X0) X1)) \quad (3)$$

Assume the following.

$$\forall X0. (l1\_metric\_1 X0) \Rightarrow (l1\_pre\_topc (k3\_pcomps\_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_metric\_1 X0)) \wedge \\ & (m1\_subset\_1 X1 (u1\_struct\_0 (k3\_pcomps\_1 X0)))) \Rightarrow (m1\_subset\_1 \\ & (k1\_frechet X0 X1) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_pcomps\_1 \\ & X0)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow ((v1\_frechet \\ & X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\exists X2. \\ & ((v1\_tops\_2 X2 X0) \wedge ((v1\_yellow\_8 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \wedge (v4\_card\_3 X2)))))) \end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 \\ & X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \Rightarrow \\ & (v1\_frechet (k3\_pcomps\_1 X0)) \end{aligned}$$