

t20_frechet2 (TMMoN-
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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_frechet : \iota \Rightarrow o$ 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 $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_frechet2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_frechet : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (r1_tarski (k1_frechet2 X0 X1) (k2_pre_topc X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k2_pre_topc X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k1_frechet2 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v3_frechet \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg(X2 \in k2_pre_topc \\ X0 X1) \wedge (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers \\ (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\neg(r1_tarski (k2_relset_1 \\ (u1_struct_0 X0) X3) X1) \wedge (X2 \in k2_frechet X0 X3))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X2 = k1_frechet2 \\ X0 X1) \Leftrightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X3 \in X2) \Leftrightarrow \\ (\exists X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\ X0)))))) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 X0) X4) X1) \wedge (\\ X3 \in k2_frechet X0 X4)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v3_frechet \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (k2_pre_topc X0 X1 = k1_frechet2 X0 X1))) \end{aligned}$$