

t23_frechet2 (TM-
cJKDT2w7epTsD7gzJdE6SZMSNNNjM5jye)

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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 $v4_frechet : \iota \Rightarrow o$ 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 $k1_frechet2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (((v4_frechet X0) \wedge (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (k1_frechet2 X0 (k1_frechet2 X0 X1) = k1_frechet2 \\ & X0 X1))) \Rightarrow (v3_frechet X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow ((v3_frechet X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow ((k1_frechet2 X0 (k1_struct_0 X0) = k1_xboole_0) \wedge \\ & ((r1_tarski X1 (k1_frechet2 X0 X1)) \wedge ((k1_frechet2 X0 (k4_subset_1 \\ & (u1_struct_0 X0) X1 X2) = k4_subset_1 (u1_struct_0 X0) (k1_frechet2 \\ & X0 X1) (k1_frechet2 X0 X2)) \wedge (k1_frechet2 X0 (k1_frechet2 X0 X1) = \\ & k1_frechet2 X0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \exists X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow ((v4_frechet X0) \Rightarrow ((v3_frechet X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((k1_frechet2 X0 (k1_struct_0 \\ & X0) = k1_xboole_0) \wedge ((r1_tarski X1 (k1_frechet2 X0 X1)) \wedge ((k1_frechet2 \\ & X0 (k4_subset_1 (u1_struct_0 X0) X1 X2) = k4_subset_1 (u1_struct_0 \\ & X0) (k1_frechet2 X0 X1) (k1_frechet2 X0 X2)) \wedge (k1_frechet2 X0 (k1_frechet2 \\ & X0 X1) = k1_frechet2 X0 X1)))))) \end{aligned}$$