

t1_matroid0

(TMUGTS4nFZdKsb9iEjcvvHGTVjpuq93zZn)

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Let $v3_pencil_1 : \iota \Rightarrow o$ be given. Let $v1_matroid0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_classes1 : \iota \Rightarrow o$ be given. Let $k1_matroid0 : \iota \Rightarrow \iota$ 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.

$$\forall X0. ((v1_matroid0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (v1_classes1 (k1_matroid0 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (m1_subset_1 (k1_matroid0 X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in k1_matroid0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_classes1 X0) \Leftrightarrow (\forall X1. \forall X2. ((X1 \in X0) \wedge (r1_tarski X2 X1)) \Rightarrow (X2 \in X0)) \quad (5)$$

Theorem 1

$$\forall X0. ((\neg v3_pencil_1 X0) \wedge ((v1_matroid0 X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1. ((v3_pre_topc X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (r1_tarski X2 X1) \Rightarrow ((v3_pre_topc X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))))$$