

t23_matroid0 (TMHKw- suV4hQG5s4VtnRUetKr2i2YNQGxwQs)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_pencil_1 : \iota \Rightarrow o$ be given. Let $v1_matroid0 : \iota \Rightarrow o$ be given. Let $v2_matroid0 : \iota \Rightarrow o$ be given. Let $v4_matroid0 : \iota \Rightarrow o$ 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 $m1_matroid0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_matroid0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0. (& \neg v3_pencil_1 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3. (\\ & \neg (r1_tarski X2 X1) \wedge ((v3_pre_topc X2 X0) \wedge (\forall X3. (\\ & (v3_pre_topc X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (r1_tarski X2 X3) \wedge (r1_matroid0 X0 X3 X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (3)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (m1_subset_1 (k2_struct_0 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v3_pencil_1 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((v3_pre_topc X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow ((m1_matroid0 X1 X0) \Leftrightarrow (r1_matroid0 X0 X1 (\\ k2_struct_0 X0)))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v3_pencil_1 X0) \wedge ((v1_matroid0 \\ X0) \wedge ((v2_matroid0 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc X0)))))) \Rightarrow \\ (\forall X1.((v3_pre_topc X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow (\exists X2.(m1_matroid0 X2 X0) \wedge (r1_tarski \\ X1 X2))) \end{aligned}$$