

t32_matroid0

(TMH2UB9dEtu4Dj2cZzDuPZHYoUZboDHYe8z)

October 27, 2020

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k6_matroid0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_matroid0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v3_pencil_1 X0) \wedge ((v1_matroid0 \\
& X0) \wedge ((v2_matroid0 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc X0)))))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r1_tarski X1 \\
& X2) \wedge (r2_matroid0 X0 X3 X1)) \Rightarrow (r2_matroid0 X0 X3 X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v3_pencil_1 X0) \wedge ((v1_matroid0 \\
& X0) \wedge ((v2_matroid0 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc X0)))))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (k6_matroid0 X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1_subset_1 X2 \\
& (u1_struct_0 X0))) (\lambda X2 : \iota. r2_matroid0 X0 X2 X1) (\lambda X2 : \\
& \iota. X2)))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v3_pencil_1 X0) \wedge ((v1_matroid0 \\
& X0) \wedge ((v2_matroid0 X0) \wedge ((v4_matroid0 X0) \wedge (l1_pre_topc X0)))))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k6_matroid0 X0 X1) (k6_matroid0 \\
& X0 X2))))))
\end{aligned}$$